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Racial Incidence of Mental Disease in Hawaii

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COMPARISON of disease rates among races is ordinarily difficult because of variations in clinical facilities, diagnostic criteria and professional qualifications in different geographic areas. The Territory of Hawaii affords unparalleled opportunities for making such comparative studies because the population is made up of several racial groups which are as yet relatively distinct. This study was undertaken to investigate the validity of a clinical impression that there are marked variations in the rate of mental illness between races in Hawaii.

Published reports concerning incidence of mental disease in various racial groups, particularly of the Oriental races, are few and scattered, and generally reflect clinical impressions rather than statistical facts. This study is a comparison of the racial incidence of mental disease in Hawaii carried out in the Psychiatric Division of The Queen's Hospital. This facility constitutes the only receiving hospital for psychiatric disorders in the Territory and as such admits a great majority of the mentally ill persons who receive hospital treatment. The statistics presented here are based on admissions to this facility over a period of one year and probably reflect with reasonable accuracy the true rates. The patients were all examined by members of the psychiatric staff, who used strictly comparable diagnostic criteria. The figures were derived from review of the clinical records and charts covering this period. The statements of the patient and his relatives of his racial extraction were made the basis for his racial classification. The racial distribution of the population is a 1947 estimate compiled by the Bureau of Vital Statistics, Territorial Board of Health.

During this year, 1947, there were a total of 1,103 admissions of 863 patients, a number being readmitted one or more times within the year. Though they were readmitted, they were counted only once. Of these, forty cases were rejected because of insufficient examination or lack of evidence of psychiatric disorder.

For the purpose of simplified classification, these cases were placed into four groups. Major reactions included schizophrenic psychoses, manic depressive psychoses, involutional psychoses and other psychoses not of organic origin. Minor reactions included psychoneuroses, psychopathic personalities, behavior disturbances and the like. Alcoholism[1] was classified separately because of the decidedly unbalanced racial distribution noted. The organic psychoses included central nervous system syphilis, senile and arteriosclerotic brain disease, post traumatic psychoses and psychoses due to infection.

The statistics have been compiled in Tables 1 and 2.

TABLE 1.—*Raw figures of 823 patients admitted to The Queen's Hospital Psychiatric Division in 1947 classified as to race and diagnostic group.*

1947 POPULATION [2]	RACE	ALL	ORGANIC	MINOR REACTIONS	ALCOHOLISM	MAJOR REACTIONS
77,843	Hawaiian and Part-Hawaiian	95	8	30	20	37
172,967	Caucasian	373	23	109	172	69
30,279	Chinese	23	5	4	0	14
171,983	Japanese	202	16	45	12	129
54,327	Filipino	74	8	16	2	48
9,546	Puerto Rican	21	5	7	6	3
7,216	Korean	17	1	3	4	9
1,314	Others	18	1	8	5	4
525,477	All	823	67	222	221	313

Table 1 presents the raw data on the 823 cases which were included in the study, grouped as to race and diagnostic classification.

TABLE 2.—*Rate of mental disorder per 100,000 population based on 823 patients admitted to The Queen's Hospital Psychiatric Division in 1947 classified as to race and diagnostic group.*

RACE	ALL	ORGANIC	MINOR REACTIONS	ALCOHOLISM	MAJOR REACTIONS
Hawaiian and Part-Hawaiian	122	10	38	25	47
Caucasian	215	13	63	99	40
Chinese	75	16	13	0	46
Japanese	117	9	26	7	76
Filipino	136	14	29	4	88
Puerto Rican	219	52	73	62	31
Korean	235	13	41	55	124
Others	1369	12	608	380	304
All	156	12	42	42	59

Table 2 presents the incidence of mental disease per 100,000 population as indicated by the study. The rates for the Puerto Rican, Korean and Others shown in the table probably present an exaggerated picture in relation to the other races because of the disproportionately small number of representatives of these groups in the total

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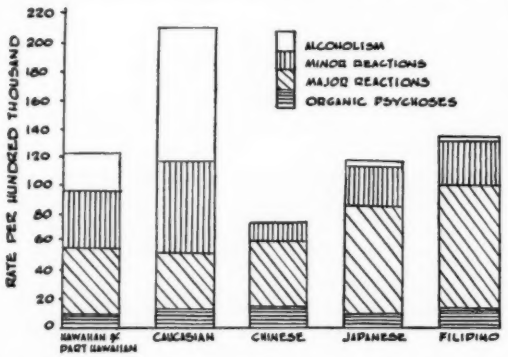
[1] The policy of the Psychiatric Division of The Queen's Hospital states that only alcoholics with symptoms of mental disorder are to be admitted.

[2] 1947 estimates of total population based on the 1940 census of the United States Census Bureau.

population. For this reason these rates were not used for comparative purposes. The remaining figures in the table are illustrated in Graph 1.



GRAPH I.—*Rate of mental disorders per 100,000 population for selected races classified as to diagnostic groups.*

It will be noted that the rate of organic psychoses remains relatively constant in the groups illustrated.

The highest incidence of mental disorder reflected by these figures is found in the Caucasian group. This is heavily weighted by the markedly high incidence of alcoholism in this group which will be commented on below. The higher rate of minor reactions among the Caucasians may be accounted for by the number of psychopathic personalities found in the "floating" population attracted to Hawaii during and after the late war.[3]

The lowest over all rate of mental illness was noted among Chinese. The Chinese population is almost free of alcoholism.[4] The Chinese are a well established, economically secure population who have been in Hawaii for several generations. The fact that this is a socially stable group may account for the relatively low rate of minor reactions.

As noted above, and as demonstrated in a previous study at the Territorial Hospital,[5] alcoholism and its complications are almost entirely confined to the Caucasian and the Hawaiian and part-Hawaiian groups. This high incidence in the Caucasian group is partly due to the presence of an unstable "floating" Caucasian population as well as the wide use of alcohol in the American culture.[6] This cultural factor is accented by the almost negligible incidence of this disease in the three Oriental groups represented in the study. The occurrence of alcoholism in the Hawaiians and part-Hawaiians is probably a result of a small cultural base[7] which makes the natives easily vulnerable to the influence of the Caucasian immigrants.

The remarkably comparable incidence of major reactions among the Hawaiian and part-Hawaiian, the Caucasian and the Chinese racial groups is worthy of note. These segments of the population have resided in the predominantly American cultural atmosphere in Hawaii for a sufficient period of time to have arrived at a more stable adjustment than the more recent arrivals.

The much higher rate of major reactions in the Japanese and the Filipino groups could possibly be construed as a racial predisposition to these illnesses; however, these groups are more recent arrivals in Hawaii, representing first and second generation immigrants. They are still in the process of adjusting to cultural patterns which are radically different from their own. An additional factor operating in the Filipino group is the unbalanced sex ratio of about two males for every female. In each of these groups, the vast majority were schizophrenic illnesses occurring mostly in the second and third decades of life.

It is noteworthy that the rate of major illness indicated in this study shows a direct relationship to the duration of residence of each group in Hawaii; the Caucasian group showing the lowest and the recently arrived Filipino group showing the highest rate of major reactions. This is probably a manifestation of the relative social disorganization of the more recently arrived immigrant groups. If this hypothesis is correct, the rate of mental illness in the Japanese and the Filipinos may be expected to decline as they become more thoroughly assimilated to the culture of Hawaii which is relatively new to them.

[3] Population of Caucasians in 1940 was 103,791 and the 1947 estimate was 172,967.

[4] One psychiatrist in three years of practice has seen only three cases of alcoholism in Chinese in Hawaii.

[5] Kepner, R D.: Psychiatry in Relation to the Territorial Hospital, HAWAII MED. J. (Sept.-Oct.) 1943.

[6] Gorer, G.: The American People, New York, W. W. Norton & Co., 1940, p. 129.

[7] Fairchild, H. P.: Dictionary of Sociology (Philosophical Library of New York, 1944).

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Keratoconjunctivitis Due to Crownflower

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THE JUICE of the crownflower, *Calotropis gigantea,* is capable of causing a severe keratoconjunctivitis with a non-permanent reduction in vision. It is a well-known fact among residents of Hawaii that the milky juice of the crownflower can cause a serious skin burn.[1] The causative toxic chemical has not been identified, but its potent properties, even in small amounts, can be appreciated readily when one studies the effect of the juice on the human eye under the slit-lamp.

Crownflower is a member of the milkweed family, *Asclepiadaceae.* It is cultivated as a decorative plant and for its flowers in many homes. When the flowers are picked, the milky juice may spatter as the flower is snapped from its stem. In the cases to be reported, the juice entered the eye when an overhead flower was picked.

The juice of the crownflower is a milky white fluid of a pH of 5.0. It dries into a sticky resinous compound. When it is applied to the skin, it causes a burning, irritating sensation which lingers for a while, even after the area is washed with water. The area of contact becomes red. The chemical analysis of the juice has not been recorded, but it is known that all members of the milkweed family are poisonous, especially in the milky sap. Analysis of other members of this family[2] showed that the alcoholic extract of the juice contained substances which are capable of causing a constriction of the peripheral blood vessels, rise in blood pressure, diuresis, and contraction of smooth muscles. The toxic compounds are glucosides. According to *Merck Index,*[3] the poison is mudarin, a compound with the formula $C_{30}H_{48}O_2$, molecular weight of 440.37. It is a light brown amorphous mass which melts at 176°C. It is soluble in water and alcohol but insoluble in ether.

Clinical Course

The deposition of crownflower juice in an eye results in a severe reaction, even though the amount that actually enters the eye is relatively small. This speaks for the potency of the toxin. Immediately following exposure of the juice to the eye and the lids, there is a burning sensation of the eye and the lids which wears off in a few minutes, and the patient is comfortable. Six to twelve hours following this, there is a progressive diminution of vision which is due to corneal edema and the resultant folds in Descemet's membrane. These folds can be seen readily with an ophthalmoscope held a short distance from the eye while the red reflex of the fundus is obtained. By varying the distance of the ophthalmoscope from the eye, or adding more plus lens by turning the wheel on the ophthalmoscope, these folds and their relative size can be seen clearly. These are seen as wrinkles (Fig. 1). The corneal epithelium, at this time, is denuded in microscopic or macroscopic proportions, and the patient complains of a foreign body sensation. The accompanying ciliary congestion, together with the decrease in vision, is enough to cause the patient to seek medical aid. Visual improvement accompanies a decrease in the size and number of posterior corneal folds. No apparent ocular damage is noted following such an accident, as there is no slit-lamp evidence of damage in the anterior segment of the eye.

Case Histories

CASE 1. A 12-year-old girl was seen twenty-four hours after some crownflower juice splashed into her right eye. There was an immediate burning and smarting of the eye which lasted for about an hour. The eye became injected, and vision was blurred. Since the initial burning and smarting, the patient had been relatively comfortable, but she now complained of blurred vision in the right eye. Examination revealed that the right vision was 20/70 and the left vision was 20/20. The right eye revealed a 3 plus bulbar injection with no conjunctival secretion. The cornea was mucky and showed no gross staining (a slit-lamp was not available at this time). The anterior chamber appeared cloudy, obscuring a clear view of the iris. The pupil was constricted to 2-3 mm. and reacted sluggishly to light. The red reflex was good, and the folds in Descemet's membrane could be seen (Fig. 1a) but fundus detail could not be made out because of corneal clouding. Tactile tension was normal and equal. One percent atropine sulfate was instilled in the right eye. When the patient was seen 5 hours later, the pupil was adequately dilated. The anterior chamber was deep, the red reflex was good, and the fundus detail could be seen and was normal. When seen the following day, the bulb was paling and the cornea appeared clearer. Right vision returned to normal 5 days after the accident.

Received for publication, April 1, 1949.

[1] Arnold, H. L., *Poisonous Plants of Hawaii,* Tongg Publishing Company, Honolulu, T. H., 1944.

[2] United States Department of Agriculture: Bulletin No. 800, June 1920, The Whorled Milkweed (Asclepias glioides) as a Poisonous Plant.

[3] The Merck Index (Fifth Edition), Merck & Co., Inc., Rahway, New Jersey, 1940.

CASE 2. A 40-year-old woman had some crownflower juice splashed into her left eye twenty-eight hours previously. There was much irritation and burning of the left eye, and vision was blurred soon afterwards. There was a continued foreign body sensation and burning of the left eye so that she had had a poor night. Examination revealed her right vision to be 20/30 and her left vision 20/200 blurred. The left eyelids showed a small amount of irritant dermatitis with marked blepharoptosis. The bulbar conjunctiva on the temporal sector showed a two plus injection of the vessels. The cornea was clear and showed no gross staining; the anterior chamber was clear and shallow; the pupil was dilated about 2-3 mm. and reacted to light rather sluggishly. One percent homatropine was instilled in the left eye, and with the pupil dilated 5 mm. the left vision was improved to 20/60. Under the slit-lamp, the cornea of the left eye revealed numerous punctate staining areas evenly distributed over the entire cornea. The corneal stroma appeared thicker than normal and Descemet's membrane was thrown into numerous irregular folds (Fig. 1b). There were no posterior corneal deposits; no aqueous beam was noted. The iris appeared clean. The lens surface was free of any cellular deposits.

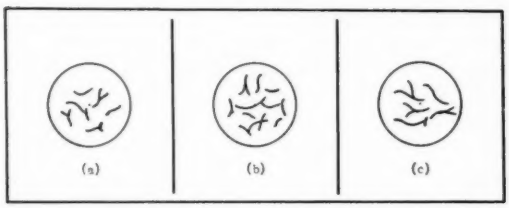

FIG. 1. Sketches of the posterior corneal folds as seen with an ophthalmoscope held a short distance from the eye.

Tonometric readings with the Shioetz tonometer revealed the right eye to have a pressure of 12 mm. and the left eye 17 mm. of Hg with a corresponding pupillary size of 3 mm. for the right eye and 7 mm. for the left eye. The patient was seen on the following morning. She experienced much pain in the left eye, which was of such severity that she had not slept at all. Tactile tension revealed the left eye to be harder than the right eye, and tonometric readings with a Shioetz tonometer revealed the right eye to be 19 mm. and the left eye 65 mm. of Hg with a pupillary size of 3 mm. for the right and 7 mm. for the left eye. She was placed on 2% eserine sulfate every 10 minutes. The tension became normal in two hours and left vision was 20/50. No further medication was used. Seven days after the accident the vision was 20/30. The posterior corneal surface still showed residual post-edematous striations. (She was refracted 5 months later by another physician, who used homatropine, and a glaucomatous attack was precipitated which was again controlled by miotics.)

CASE 3. A 44-year-old woman had some crownflower juice splashed into her right eye fifteen hours previously. Examination revealed her right vision to be 20/200 and her left vision 20/20. The right eyelids showed a mild irritant dermatitis of both lid margins. Bulbar conjunctival vessels were injected about two plus. The cornea appeared mucky and stained superficially in small scattered areas. Descemet's membrane was thrown into numerous irregular folds (Fig. 1c). The anterior chamber appeared clear, and the red reflex of the fundus appeared normal. Tactile tension was equal and normal. She was placed on a local ophthalmic anesthetic ointment. When she was seen two days later, vision in each eye was 20/20 in spite of the fact that the folds in the posterior corneal surface were still present but of diminished quantity. Since this accident, the patient has noted colored rings about lights when seen with her right eye. When she was seen ten days after the accident, the posterior corneal striations were almost completely absent and colored rings about lights were no longer noted.

Experimental Studies

The clinical course of the immediate effect of the crownflower juice on the rabbit's cornea was studied. A drop of the juice of a freshly obtained crownflower plant was instilled into each eye of two rabbits. After five minutes, the eyes were stained with fluorescein and washed with saline. No gross staining was noted on the cornea, the translucency of the cornea was unimpaired, and the pupillary size was unaltered.

Immediately after this observation, a drop of U.S.P. glycerin was instilled into the left eye of each rabbit. Glycerine was used with the idea that its viscosity and absorptive properties might be able to stem and possibly neutralize the penetration of the toxic elements into the cornea and the anterior chamber. Ten minutes following the application of glycerine, both eyes were again stained with fluorescein and washed with saline. No gross difference was noted between the eyes that had glycerine instilled and the control eyes. The cornea of both eyes showed some surface changes, which appeared to take a faint stain. The transparency of the cornea, the anterior chamber, and the pupil were not changed.

One hour after the instillation of the crownflower juice, the cornea stained in all eyes but to varied degrees. It appears that glycerine made little difference, for in one eye where glycerine was instilled, the corneal staining was larger; whereas in the other rabbit, the glycerine instilled eye also showed evidence of staining, but to a lesser degree. There was a beginning loss of transparency of the cornea of all eyes. The pupillary size was not altered. In the eyes that had glycerine instilled, the palpebral fissure was slightly narrowed, and there appeared to be a reflex ptosis.

Approximately five hours later, the corneal clouding was more pronounced. Its loss of transparency had increased, and the pupillary size was reduced about half. Blepharoptosis of the eye in which glycerine was instilled was still evident.

Two other rabbits were used with the purpose of studying the late effect of crownflower juice on the cornea. The juice was instilled only in

the right eye of each rabbit. Three hours after instillation, the eye showed a two plus conjunctival injection. The cornea stained grossly over half its area while the unstained cornea appeared mucky, making the anterior chamber appear cloudy. The pupil was constricted to 2-3 mm., while the control pupil measured 8-9 mm. Six hours after the instillation of the juice, the eye findings were essentially the same except that the conjunctival sac contained a layer of whitish, stringy secretion. Twenty-four hours later the bulbar conjunctival injection was reduced, corneal staining was minimal, and the cornea was clear, with the pupil dilated to the same size as the control eye.

Discussion

It is apparent from the clinical and experimental observations that the milky juice or latex of the crownflower contains a powerful toxin which is able to denude the epithelium of the cornea and the conjunctiva, penetrate the cornea and cause an edema of the corneal substance which results in large folds in the posterior corneal surface. Whether the toxin acts directly or reflexly, there is, also, an accompanied miosis and congestion of the iris, with a probable increase in the protein content of the aqueous of the anterior chamber.

The marked reduction in vision in these patients is due primarily to a change in the refractive media by the edema of the cornea with large folds in the posterior corneal surface and, secondarily, to a change in the index of refraction of the aqueous in the anterior chamber and the reflex myopia due to direct or reflex ciliary spasm.

The poisonous properties of the juice do not depend on its pH of 5.0, for the juice of another non-milky plant (aloe) with a pH of 4.0 did not cause any reaction on the cornea. Apparently, washing the eye out even five minutes following the instillation of crownflower juice does not alter its harmful effect, for it appears that the toxins have already penetrated the corneal epithelial barrier in spite of no gross evidence of corneal epithelial loss as tested with fluorescein.

It was felt that the hygroscopic properties of U.S.P. glycerine might retard the corneal penetration of the toxins and thus afford a means of treatment. However, instillations of several drops of glycerine, even five minutes after the crownflower juice had been instilled into a rabbit's eye, showed no beneficial effect three hours later. However, since it has been shown in another member of the milkweed family that the poisonous properties are found in the alcoholic extract[2] of the milky sap, it is not likely that the use of glycerine would be able to affect these substances.

Treatment

Since there is no permanent ocular damage to an eye which has contact with crownflower juice, treatment is entirely symptomatic. The use of a bacteriostatic and anesthetic ophthalmic ointment will be sufficient to give comfort. If corneal denudation is marked, the added application of a tightly applied eye patch will give more comfort and possibly speed up healing by immobilization. If miosis and congestion of the iris are present the use of a mydriatic will help.

Summary and Conclusions

The accidental instillation of crownflower juice in the eye is capable of causing a severe keratoconjunctivitis with marked reaction in the anterior segment of the eye. There is an accompanying temporary visual impairment varying in duration from five to seven days. The penetration of the toxin is immediate and is not altered by aqueous irrigation or the action of glycerine U.S.P. even as early as five minutes following contact. There is apparently no permanent injury to the eye.

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The Cytologic Diagnosis of Cancer by the Smear Technic
II. Technical Methods

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IN A PREVIOUS communication the history, applications and future of the cytologic diagnosis of cancer by the smear technic were discussed by Quisenberry.[1] The present report is concerned with technical methods.

Preparation of Smears

Vaginal and Cervical Smears

Vaginal smears are prepared by aspirating secretion from the posterior fornix with blunt straight or curved pipettes 7 to 8 inches in length and 5/16 of an inch in diameter. Such pipettes can easily be made in the laboratory from glass tubing of the proper size, and can also be obtained commercially (Fig. 1). The aspirated material is

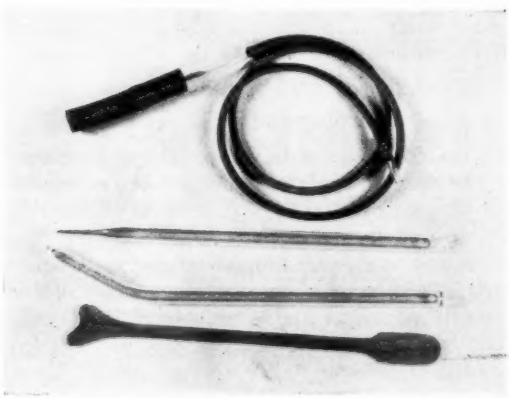

FIG. 1. Wooden spatula, straight and curved blunt pipettes, and rubber tube to provide suction.

blown onto a clean slide and spread out as uniformly as possible with the tip of the pipette until it covers most of the slide; the slide is then placed, while still wet, in the fixing solution. Douching by the patient prior to her visit to the doctor's office will wash away accumulated secretion and make the procedure virtually useless; the patient should therefore be advised not to take a douche for at least twenty-four hours before the examination. It is advisable to obtain the material before bimanual examination or the introduction of a vaginal speculum. Malignant cells from both adenocarcinomas of the fundus and squamous cell carcinomas of the cervix frequently appear in the vaginal fluid.

Cervical smears may be obtained by two different procedures. The cervical mucus may be aspirated from the endocervical canal with a pipette such as those used for obtaining vaginal secretion, or actual scraping of the squamo-columnar junction with a wooden spatula—the "surface biopsy" of Ayre—can be done. The cells of an adenocarcinoma of the fundus may be concentrated in the cervical mucus, while actual scraping of the squamo-columnar junction is probably the most reliable way of obtaining material in early carcinoma of the cervix. A wooden spatula made for this purpose can be purchased commercially or one can be easily made from a tongue blade (Fig. 1).

Sputum and Bronchial Secretion

The patient produces sputum by a cough following deep inspiration. The fresh specimen is spread out in a Petri dish over a dark background and blood-flecked particles or bits of material resembling tissue fragments are selected with a blunt forceps, smeared by several longitudinal "swipes" on a clean glass slide, and fixed immediately in ether-alcohol. The number of smears made from each specimen is limited only by the amount of technical help available, but it is ordinarily impractical to make more than two or three smears from each specimen. The procedure should be repeated several times, however, if there is a real suspicion of bronchogenic carcinoma.

Material aspirated from the bronchi during bronchoscopic examinations should be saved in the trap of the bronchoscope and sent to the laboratory immediately. The material is centrifuged, if necessary, and smears are made of the sediment, fixed and stained in the usual way.

According to Farber *et al.*[2] the examination of

* Prepared in conjunction with W. B. Quisenberry, M.D., Chief, Bureau of Venereal Diseases and Cancer Control, Territorial Dept. of Health, Honolulu.

[1] Quisenberry, W.: The Cytologic Diagnosis of Cancer by the Smear Technique: I. History, Applications and Future of Method, HAWAII M. J. 8:29 (Sept.-Oct.) 1948.

[2] Farber, S., Benioff, M., Frost, J., Rosenthal, M., and Tobias, G.: Cytologic Studies of Sputum and Bronchial Secretions in Primary Carcinoma of the Lung, Diseases of Chest, 14:633 (Sept.-Oct.) 1948.

sputum is just as reliable as the examination of bronchial aspirations in the diagnosis of bronchogenic carcinoma.

Gastric Secretion

It has been our custom to remove the fasting gastric contents and then to inject 30 cc. of normal saline. The patient changes his position several times, and the fluid is aspirated and reinjected in an effort to wash out the stomach as completely as possible. The material is then centrifuged at once in 50 cc. tubes, the supernatant fluid removed, and smears made of the sediment with a capillary pipette.

The fasting gastric contents may be handled in the same way, although some believe that washing the stomach as described above is a more reliable method of obtaining material. Graham *et al.*,[3] working with the fasting gastric secretion, found malignant cells in 15 of 24 cases of carcinoma of the stomach. It is possible that a larger amount of fluid—75 or 100 cc.—and more vigorous and prolonged washing would yield a higher percentage of positive results. Gastric material must be handled at once because the cells undergo rapid deterioration if the specimen is allowed to stand for any length of time.

This difficulty can be overcome by aspirating the gastric secretion directly into 95 per cent alcohol, or formalin, although it has been our experience that smears made from this type of material are less satisfactory than those made from the unfixed secretion. Such fixed sediments, however, can be readily embedded in paraffin, sectioned in the usual way, and stained with hematoxylin and eosin.

Urine Sediment

A fresh specimen of urine is obtained and the entire specimen is centrifuged at once in large tubes. Smears are made with a capillary pipette on clean slides coated with a film of egg albumin fixative, placed in the alcohol-ether fixative, and stained in the usual way.

Fixation

Almost any standard fixing solution can be used for this work, but the one devised by Papanicolaou,[4] consisting of equal parts of 95 per cent ethyl alcohol and ether, is probably the most satisfactory. Ten per cent formalin is unsatisfactory if the smears are to be stained by the Papanicolaou method, but works well if hematoxylin and eosin are used to stain the slides. Just why this ether-alcohol combination works so well is unknown; apparently it was arrived at by trial and error. The ether serves as a readily available diluent which may promote rapidity of fixation.

We have found it convenient to dispense the fixing solution in bakelite-top, screw-cap coplin jars. Such jars hold 5 slides, or 10 if they are placed back to back. It is also convenient to number the slides in the laboratory with a diamond point pencil, and to supply numbered slides and coplin jars of fixative to the various clinical departments. It is then a simple matter for the doctor preparing the smears to ask his nurse or technician to copy the number of the slides together with the patient's name and other pertinent information on a laboratory request slip. Each jar of fixative can be used at least five or six times before discarding, but must be filtered each time before use in order to remove debris which has dropped off the previous batch of slides.

The smears must be made on clean slides. Our nurses and technicians have been instructed to immerse each slide in the fixing solution and then wipe it dry with a clean cloth just before making the smear. After the smear has been prepared it should be dropped immediately while still wet into the fixing solution. Fixation takes place within thirty minutes or less, but the smears may be left in the solution for as long as two weeks without affecting the staining qualities of the cells.

Preparing Smears for Mailing

An inflammable ether-alcohol solution cannot be sent through the mail, but smears can be prepared and fixed as described above, and then covered with three or four drops of glycerin while still wet. A clean glass slide is applied as a cover slip and the preparation can then be mailed in the usual manner. Glycerin prevents the smears from drying, and will preserve the staining properties of the cells for two weeks or longer.

An alternative method suggested by Ayre[5] consists in aspirating the material to be examined directly into a test tube filled with the ether-alcohol fixative. After fixation the tube is centrifuged and all of the supernatant fluid removed except 1 or 2 cc. The tube, tightly stoppered, can then be mailed, but smears of such fixed material are relatively unsatisfactory, and it will usually be necessary for the processing laboratory to embed the sediment in paraffin.

[3] Graham, R. M., Ulfelder, H., and Green Jr., T. H.: The Cytologic Method as an Aid in the Diagnosis of Gastric Carcinoma, Surg. Gyn. & Obs. 86:257 (March) 1948.

[4] Papanicolaou, G. N., and Traut, H. F.: Diagnosis of Uterine Cancer by the Vaginal Smear, New York, The Commonwealth Fund, 1943, pp. 3, 6.

[5] Ayre, J. E.: Vaginal and Cervical Cytology in Uterine Cancer Diagnosis, Am. J. Obs. & Gyn. 51:3 (June) 1946.

Staining

The technic devised by Papanicolaou[6] is satisfactory.

Dyes Required

1. **Hematoxylin.** Harris' alum hematoxylin is satisfactory. Our best results have been achieved with aqueous alum hematoxylin prepared as suggested by Gates and Warren:[7]

Hematoxylin	1.0 Gm.
Ammonium or Potassium Alum	20.0 Gm.
Distilled Water	400.0 cc.
Thymol	1.0 Gm.

Dissolve the hematoxylin crystals with the aid of gentle heat in 100 cc. of distilled water and add to the alum which has been dissolved in 300 cc. of distilled water. Lightly stopper and allow to ripen for two weeks. It is then ready for staining and should be kept tightly stoppered.

2. **OG 6.**

Orange G—0.5% in 95% ethyl alcohol	100.0 cc.
Phosphotungstic Acid, Merck	0.015 Gm.

3. **EA 36.**

Light Green SF yellowish—0.5% in 95% ethyl alcohol	45.0 cc.
Bismarck Brown—0.5% in 95% ethyl alcohol	10.0 cc.
Eosin yellowish—0.5% in 95% ethyl alcohol	45.0 cc.
Phosphotungstic Acid, Merck	0.2 Gm.
Lithium Carbonate, saturated aqueous solution	1 drop

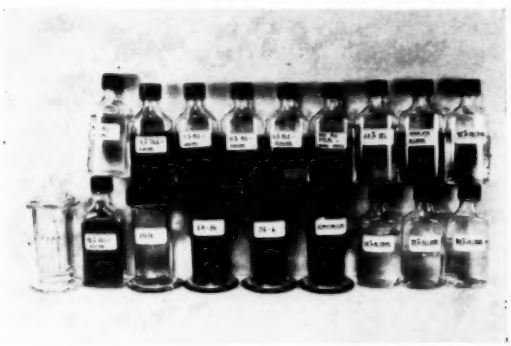

FIG. 2. Solutions necessary for staining smears by Papanicolaou's method.

Stock solutions of the dyes, 0.5% in 95% ethyl alcohol, are first prepared. Since the solubility of most of these dyes is low in 95% alcohol, it is recommended that 10% aqueous solutions be prepared first. A mixture of 5% of the aqueous 10% solution and 95% of absolute ethyl alcohol results in a 0.5% solution in 95% alcohol[7] and appears to give better solubility than if the dyes are made up directly in alcohol. Heat should be used in making the stock solutions in order to achieve the highest degree of solubility possible, but even with heat some of the dyes, especially the orange G, will not go completely into solution. The proper amounts of the stock solutions of the dyes are then combined with the aid of a graduate, each individual dye solution being filtered before mixing. It is not necessary to filter the final mixture.

[6] Papanicolaou, G. N.: A New Procedure for Staining Vaginal Smears, Science 95:438 (April 24) 1942.

[7] Gates, O., and Warren, S.: A Handbook for the Diagnosis of Cancer of the Uterus by the Use of Vaginal Smears, ed. 2, Harvard University Press, Cambridge, 1948, p. 18.

Both the orange G stain and the EA 36 combination are quite stable. Kept in airtight, screw-cap, coplin jars, they retain their staining activity for a long time. We have found that 50 cc. of each dye solution will stain from 80 to 100 smears with no apparent loss of activity.

Staining Schedule

1. Remove smears from the fixative and flood immediately while still wet with thin celloidin,[8] pouring the excess back into the bottle.
2. Allow to dry slightly and wipe off excess celloidin from the back of the slide and around the edge of the smear.
3. Dip smear 10 times in 80%, 70% and 50% ethyl alcohol (isopropanol can be substituted here) and then 10 dips in tap water.
4. Hematoxylin, 3 to 10 minutes.[9]
5. Ten dips in tap water and then dip 3 or 4 times in 0.5% aqueous solution of hydrochloric acid.
6. Rinse in tap water and allow to stand in water containing a drop or two of saturated solution of lithium carbonate until blue.
7. Dip 10 times in 50%, 70%, 80% and 95% ethyl alcohol or isopropanol (use the same alcohols as in step 3).
8. Stain 1 to 2 minutes in OG 6.
9. Dip 10 times in three separate solutions of 95% ethyl alcohol.[10]
10. Stain in EA 36 two minutes.
11. Dip 10 times in three separate solutions of 95% ethyl alcohol.
12. Absolute alcohol fifteen to thirty seconds.
13. Absolute alcohol and xylol, equal parts.
14. Blot gently with fine bibulous paper.
15. Clear in xylol and mount in gum dammar.

General Principles

The various solutions used in the staining technic described above can be conveniently stored in a series of ordinary medicine bottles with air-tight screw caps (Fig. 2). The three dye solutions are kept in air-tight, screw-cap coplin jars. Processing is carried out in an empty coplin jar, pouring the various solutions in and out by means of a funnel. The slides are transferred in and out of the dye solutions with untoothed forceps. This method of processing the smears saves space and conserves time, and is also advantageous because all of the solutions are kept tightly stoppered, thus preventing evaporation. The same system can be employed with larger staining dishes and trays, but larger bottles and larger amounts of solution will of course be required.

Cancer diagnosis depends almost wholly upon nuclear changes and it is therefore of fundamental importance to achieve precise nuclear staining. The hematoxylin must be properly prepared, and the staining and decolorizing time for each batch adjusted so that nuclear structures are sharply and precisely stained. Counterstaining with the cytoplasmic stains OG 6 and EA 36

[8] This step has been added to the technic by the author and has proved extremely valuable. The thin film of celloidin over the smear does not interfere with staining in any way, and prevents material from dropping off the slide during the staining process. To prepare thin celloidin, dissolve 10 gms. of dry celloidin in 150 cc. of equal parts of ether and absolute ethyl alcohol. Add 10 cc. of this thick celloidin to 190 cc. of equal parts of ether and absolute ethyl alcohol.

[9] The optimum time for hematoxylin staining varies with each batch of the dye, and must be determined by trial and error, and adjusted from time to time.

[10] Isopropanol cannot be substituted for ethyl alcohol here without affecting the staining of the cells.

adds very little in cancer diagnosis, but it does add something, particularly in squamous cell carcinomas, because keratinized cells can be sharply distinguished from those of the non-keratinized type.

Discussion

It should be emphasized that one is not limited to smears in examining body secretions for malignant cells. Hunter and Richardson[11] have devised several valuable embedding and staining methods for the examination of sputum, gastric washings, vaginal secretion and other body fluids involving fixation in 10 per cent formalin and precipitation of mucus in saturated aqueous picric acid, followed by paraffin embedding. Ideally one would first make smears for Papanicolaou staining, and then embed the remaining material in paraffin, but practically this may be impossible because of the amount of time and effort involved. It therefore becomes necessary to select the technic which seems most appropriate for the specimen at hand.

Interpretation of the stained smears is by no means an easy task and requires considerable training and experience. A pathologist skilled in tissue diagnosis is not necessarily a good cytologist, although his knowledge of cells gives him a good background on which to base the necessary training. If the smears are examined properly, every portion of the slide is looked at under medium power, preferably with 12.5 or 15X wide-angle oculars, by crossing back and forth across the slide with the aid of a mechanical stage. Each suspicious cell or cell group is marked with ink, and then examined more carefully under higher magnification. Screening one slide in this manner takes ten minutes or longer, and it is therefore necessary to train technicians to do this screening work.

The basic facts on which the cytologic diagnosis of cancer rests are (1) that the majority of carcinomas, even in their earliest stages, exfoliate cells into the body fluids which come in contact with them and (2) that such cells can be recognized as malignant by trained persons with the aid of appropriate technics.

[11] Hunter, W. C., and Richardson, H. L.: Cytologic Recognition of Cancer in Exfoliated Material from Various Sources, Surg. Gyn. & Obst. 85:275 (Sept.) 1947.

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Multiple Transfusions in Chronic Lymphatic Leukemia

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FOR THE PAST two years, detailed records have been kept at the Blood Bank of Hawaii on a case of chronic lymphatic leukemia, complicated by a hemolytic process. The purpose of this paper is to present the laboratory findings (determined from blood counts, differential counts, hemoglobin determinations, platelet counts, selective agglutination tests, tests for iso-antibodies and urine tests) and enough of the case history to make these intelligible.

Case Report

Mrs. W., a Caucasian woman 73 years of age, was of blood type OMNRh$_2$. On December 3, 1945, she was admitted to The Queen's Hospital with a diagnosis of pneumonia. A blood count done on December 3 gave the following picture:

Hemoglobin	9.5 gm.
R.B.C.	3,150,000
W.B.C.	71,850
Neutrophilic granulocytes	30
Lymphocytes	68
Monocytes	2

Penicillin therapy was started immediately and on December 4, 500 cc. of banked blood was given. The final diagnosis was lobar pneumonia and chronic lymphatic leukemia. A blood count done December 7 gave the following:

Hemoglobin	11.00 gm.
R.B.C. 4,010,000 sl. anisocytosis and polychromasia	
W.B.C.	36,350
Neutrophilic granulocytes	5
Lymphocytes	94
Eosinophilic granulocytes	1

A heterophil agglutination test was negative. The patient was dismissed December 10, 1945.

The patient was readmitted to the hospital August 8, 1946, for transfusion, since oral administration of ferrated liver had failed to maintain her red cell count. Outside of a cross-match no other laboratory work was done.

The third admission was on January 1, 1947, with a diagnosis of acute tonsillitis and chronic lymphatic leukemia. The patient had suffered an ear and throat infection with loss of hearing in December of 1946. She was given penicillin intramuscularly and supportive therapy which included 500 cc. of whole banked blood on January 6, 1947.

On April 9, 1947, the patient was sent by Dr. Berk to the Blood Bank for transfusion there. She was given 1000 cc. of whole blood. At this time her pre-transfusion blood count showed hemoglobin of 42%, red cell count of 2,280,000 and 52,000 white cells of which 96% were lymphocytes. Following this she received six units of blood during the next two months. Her condition was good, except for her mild anemia. Transfusions were effective in that the hemoglobin level and the red cell count were adequately raised and maintained themselves.

During the months of July and August 1947 there was an increased need for transfusions. In June she had started having mild reactions and in July had had a chill followed by a rise in temperature to 102.6 F. At this time it was decided to give her red blood cell suspensions rather than whole blood, to remove any irregular agglutinins which might be present in the donor plasma. During August the patient received seven units of red blood cell suspensions in 5 per cent dextrose in saline.

Early in September it became necessary to transfuse her every other day. Her hemoglobin content dropped as low as 20% and her red cell count to 1,320,000. The leucocyte count fluctuated from about 15,000 to 20,000. The patient's physical condition was such that she was admitted to The Queen's Hospital and permission was granted to the Blood Bank physician to transfuse her there. She received two red blood cell transfusions. Since that time all transfusions have been given at the Blood Bank of Hawaii. She received 13 transfusions of whole blood in September and 26 during October. It was apparent that a hemolytic state had developed which was destroying the red cells almost as rapidly as they were infused. The serum was markedly icteric, and her red cell count would drop a million to a million and a half in forty-eight hours. The transfusions given in September were not followed by any reactions despite the fact that the cross-matches showed some clumping on the minor side in conglutination tests.

In November she received 24 transfusions and in December, 22, the red cell count being just maintained at a level of about 2,000,000. On December 24, 1947, she had a mild reaction, feeling chilly for five minutes, with her temperature rising to 99.6° F. She had two more mild reactions at about the same time, and it was thought that these might be due to using too fresh blood. An attempt had been made to give her blood not more than twenty-four hours old, hoping to provide her with more resistant cells. When these mild reactions began, bloods three or more days old were used and these were accepted without reactions.

In January, 1948, her condition began to improve; 15 transfusions were needed to keep her comfortable and to maintain her hemoglobin content close to 10.0 grams and her count about three million red cells. The leucocyte count gradually decreased to a level around 12,000. She received but one unit of blood at a time rather than two as had previously been necessary.

During February and March 1948, she received 11 units of blood each month, and nine in April. Since that time she has received 36 more transfusions. On March 21, 1949, her pre-transfusion count showed hemoglobin to be 8.2 grams, red blood cells 2,640,000, white cells 8,450 and the post-transfusion count showed hemoglobin 8.4 g., red cells 3,440,000, white cells 11,500. Her physical condition is good. She manages her own cooking and housework and goes to the movies now and then. Her hearing has greatly improved.

Laboratory Work Done

Altogether Mrs. W. has received 191 units of blood in transfusions as of April 1, 1949. Of

these 16 were of red blood cells only and the rest of whole blood. In almost every case a pre- and post-transfusion count of both red and white cells were made as well as hemoglobin determinations (Sahli and Klett Hemoglobinometers) before and after transfusions. Numerous differential counts have been done.

A pre- and post-transfusion record of the platelet count was kept from September 15, 1948, through November 27, 1948, and is now again being kept.

At the time the hemolytic process was the most acute, a developing test was run to determine if iso-antibodies were involved.

Two selective agglutination tests were performed in December, 1948, and January, 1949, to determine the survival of transfused cells.

Since it was feared that a condition of hemochromatosis might result due to the multiple transfusions this patient has received, an urobilin test and an urobilinogen test were performed on March 21, 1949.

Over-all Blood Picture

1. Comparison of Pre- and Post-Transfusion Counts (See Table 1).

TABLE 1: *Comparison of Pre- and Post-Transfusion Blood Picture.*

BLOOD ELEMENT	INCREASE	DECREASE	NO CHANGE
Hgb—%			
Total Transfusions	124=94.7%	4=3.1%	3=2.2%
1-10	77	4	3
11-20	38	0	0
21 and over	9	0	0
RBC			
Total Transfusions	126=96.18%	5=3.82%	0*
10,000-500,000	67	4	0
500,001-1,000,000	42	1	0
1,000,001-2,000,000	17	0	0
WBC			
Total Transfusions	80=61.0%	50=39.0%	1=0.9%
100-1,000	30	14	1
1,001-10,000	48	32	0
10,001 and over	2	4	0

* Note: There was no RBC count available in one of the transfusions.

Of 131 hemoglobins in grams per cent determined over the two year period, comparisons between the pre- and post-transfusion counts show that 124 (94 per cent) showed an increase, 4 (3.1 per cent) showed a decrease and 3 (2.2 per cent) showed no change.

Of 131 red cell counts done during the same period comparisons between the pre- and post-transfusion counts show that 126 (96.2 per cent) showed an increase following transfusion and 5 (3.8 per cent) showed a decrease.

The decreases in the red blood cell count noted occurred mainly during September and October of 1947 (See Table 1) when the hemolytic process was at its height, four occurring during that time.

There has not always been a correlation between the drop in the red blood cell count and the hemoglobin determinations. In general, however, any variations were the exception rather than the rule.

Of 131 W.B.C. counts done over the same period 80 (61 per cent) showed an increase following transfusion and 50 (39 per cent) a decrease; one showed no change.

The increase or decrease in the white cell count following transfusion has not been nearly so stable (See tables 1 and 2). In general the white count

TABLE 2: *Effect on Blood Picture of Transfusion with Fresh Blood and Blood Stored for Varying Periods.*

BLOOD ELEMENT	No. Transfusions	Increase	Decrease	No Change
	FRESH BLOOD			
Hgb	4	4	0	0
RBC	4	4	0	0
WBC	3	3	0	0
	BLOOD 1-10 DAYS OLD			
	No. Transfusions	Increase	Decrease	No Change
Hgb	117	110	4	3
RBC	113	107	6	0
WBC	113	65	47	1
	BLOOD 11-20 DAYS OLD			
	No. Transfusions	Increase	Decrease	No Change
Hgb	10	10	0	0
RBC	15	15	0	0
WBC	15	13	2	0

seems to have increased temporarily immediately after transfusion. However, the overall picture shows a steady decline in W.B.C. from 47,000 in April 1947 to 8,450 at the present time.

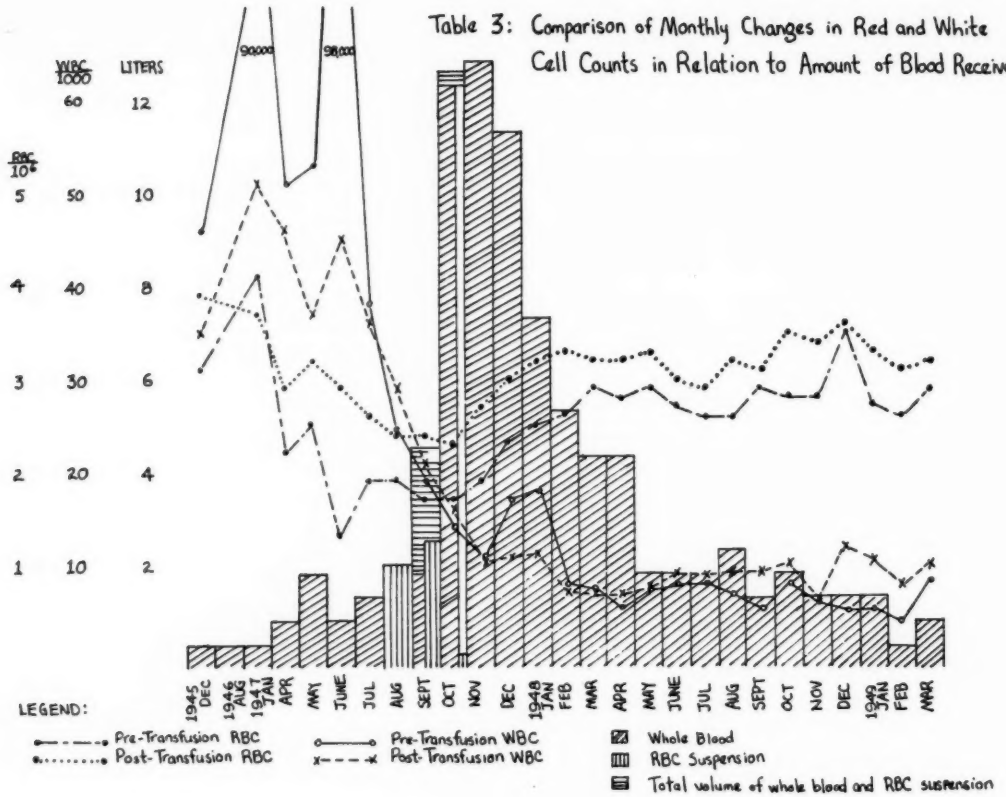
For a comparison of average monthly changes in the white and red cell counts in relation to amount of blood received see accompanying chart (Table 3).

2. The differential count has shown an improvement in the blood picture. At one time in December, 1945, the lymphocyte count ran as high as 94 per cent. Her more recent counts vary from 60-80 per cent lymphocytes with a corresponding increase in neutrophilic granulocytes. Her most recent blood smear shows poikilocytosis, anisocytosis and hypochromia of the red cells. The red cells are slightly smaller than normal. Reticulocytes were never present to the extent they have been reported in other cases.[1] The latest count gave a count of 0.9 per cent.

3. Effect of Age of Transfused Blood on General Blood Picture (See Table 2). The age of blood given in transfusion seems to have very little to do with the resulting blood picture. Generally speaking, an increase in hemoglobin and red and white cells was observed following transfusion regardless of the age of the blood. At one time the patient had a minor pyrogenic reaction following administration of one-day-old blood

[1] Stats, D., Rosenthal, N. and Wasserman, L. R.: Hemolytic Anemia Associated with Malignant Diseases, Am. J. Clin. Path. 17: 585 (Aug.) 1947.

Table 3: Comparison of Monthly Changes in Red and White Cell Counts in Relation to Amount of Blood Received



and her previous record showed that other reactions had followed the use of one or two-day-old blood. Bloods three or four days old and older were well taken.

Pre- and post-transfusion indirect platelet counts were done on this patient from September 15 through November 27, 1948, covering ten transfusions. They showed an increase of platelets seven times following transfusion and a decrease three times. During this period bloods from 5 to 13 days old were used. *There is no apparent relation, within these limits, between the age of the blood and the effect on the platelet count.* We found this to be true also in work done on another case at the Blood Bank covering twelve transfusions in which strictly fresh bloods were used in comparison with older bloods.

4. Survival of Transfused Cells: Two experiments to determine the duration of cell survival in the recipient after transfusion were performed in December, 1948, and January, 1949.[2] Since the patient is an Rh_2-positive, the donor chosen was an Rh-negative. By agglutinating the Rh-positive cells with anti-Rho serum and counting the unagglutinated cells, the amount of Rh-negative blood cells left in the recipient's circulation were evaluated. The cell survival time was only six days. The donor cells apparently were rapidly removed from the circulation, though the patient's own cells were not being destroyed as rapidly as previously. The patient's count is still decreasing about 500,000 red cells between transfusions. The infused cells apparently are removed within seven days and if her own cells were being destroyed as rapidly she would need transfusions at more frequent intervals than, as now, 18 to 19 days.

Tests for Iso-Antibodies

The question arose during the height of the hemolytic process, and can still be asked, as to what causes the destruction of the red blood cells. Attempts were made to demonstrate iso-hemolysins or irregular agglutinins in the serum of the patient but without sucess. Wiener's new direct

[2] Osborne, Dorothy E. & Denstedt, Orville F.: Estimation of Cell Survival After Transfusion by Selective Agglutination, J. Clin. Invest. 26: 655 (July) 1947.

test,[3] whereby one part of albumin is added to four parts of the plasma to be tested, was used. In the test, such fortified patient's plasma was incubated for three hours with her own cells, and with other O cells in suspension for a control. Neither her own cells nor the control cells hemolyzed. We then washed the cells with saline to remove all adherent serum proteins, and subjected them to Coomb's test[4] in order to ascertain if any globulin antibodies had been attached to the surface of the cells. This test was also negative.

Tests to Determine Extent of Hemochromatosis

Due to the great number of transfusions this patient has received, plus the great destruction of red blood cells which has occurred, some injury to the liver and kidneys due to deposition of iron must have occurred. During September and October of 1947, when the hemolytic process was at its height, the serum of the patient was markedly icteric, the skin bronzed and the patient complained of severe pain in the splenic area. At that time there was no evidence of urinary suppression or nephritis. Tests performed on March 21, 1949, gave the following results:

Bilirubin Test:
- Van den Bergh direct test: negative
- Van den Bergh indirect test: 0.5 mg/100 cc. blood (normal—0.25 mg. %)

Urinalysis:
- pH 6.5
- color—amber
- albumin—negative
- urobilin—one plus
- urobilinogen—negative in 1:10
- microscopic study:
  - calcium oxalate crystals—moderate
  - amorphous urates—moderate
  - white blood cells—15-20/hpf
  - red blood cells—2-3/hpf
  - epithelial cells—occasional

Other tests performed at this time gave the following results:
- Reticulocyte count: 0.9% (normal—anything below 2%)
- Fragility Test:
  - 0.45% saline—20% hemolysis
  - 0.38% saline—89% hemolysis
- Normals[5]
  - 20-50% hemolysis
  - 75-95% hemolysis
- Heparinized specimen incubated at 37° C. for one hour—no hemolysis
- Patient's serum plus O cells in saline—no agglutination
- Patient's serum plus O cells in plasma—no agglutination
- Patient's serum plus O cells in fortified plasma—no agglutination

Patient's Serum Protein:	Normals:
Total protein—3.8 gm. %	6.0-8.0 gm. %
Albumin—2.6 gm. %	4.0-5.5 gm. %
Globulin—1.2 gm. %	1.4-3.0 gm. %

Summary

The Blood Bank of Hawaii has followed a case of chronic lymphatic leukemia from 1945 up to the present time. Since April, 1947, this patient has received regular transfusions at the Blood Bank. The severe hemolytic process which complicated the leukemia was held in check by multiple transfusions until it became inactive. It was felt that the multiple transfusions may have caused hemochromatosis but we have been unable to demonstrate this. The chronic lymphatic leukemia has apparently either become quiescent or has become aleukemic.

From the multiple transfusions given to this patient we have learned that an individual with this type of disease may be able to tolerate a great number of transfusions without apparent permanent damage to the reticulo-endothelial system. Certainly at one time the transfusions were the only thing which kept the patient alive.

Also of interest is the fact that the age of transfused blood within its expiration limits has nothing to do with the resultant blood picture.

[3] Wiener, A. S. & Hurst, J. G.: A New Test (Direct Test) for Rh Blocking Antibodies, Exper. Med. & Surg. 5: 285 (May-Aug.) 1947.

[4] Hill, J. M. and Haberman, Sol.: Demonstration of Rh Antibodies in the Newborn and Further Evidence of the Pathogenesis of Erythroblastosis, J. Lab. and Clin. Med. 31: 1053 (Oct.) 1946.

[5] Fennel, Eric: Personal communication.

NOTE: Detailed charts are available on file at the Blood Bank of Hawaii.

Paratyphoid A Fever

First Proven Case in Hawaii

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THIS is the first proven case of paratyphoid A fever in the Territory of Hawaii. The microorganism was isolated by blood culture and identified by antigenic and biochemical analysis. This incidence demonstrates again that the history of a recent immunization with the typhoid-paratyphoid vaccine, often referred to as "triple typhoid" and as "T.A.B." vaccine, offers little assurance that the disease is not typhoid or paratyphoid A.[1] Immunization merely makes the diagnosis a little more difficult by modifying the disease or causing an atypical Widal. The present case received the T.A.B. vaccine in 1941 and a booster dose in 1944.

There have been many studies made on the controversial question of cross-immunization between the members of the typhoid-paratyphoid group of microorganisms.[2] In individuals vaccinated with the T.A.B. vaccine, significant amounts of protective substances against the heterologous types of Salmonella have been found. The T.A.B. vaccine is at present considered to be an effective immunizing agent against certain types of Salmonella, but not against the paratyphoid C group.[3] The present T.A.B. vaccine does not ordinarily include the group C Salmonella. However, it probably offers a little protection against an overwhelming infection.

It has also been shown by these investigators that when active immunization with the monovalent typhoid vaccine is given, there is only a questionable cross-immunization to S. schottmuelleri (paratyphoid B). Immunity induced by each of the three components of the T.A.B. vaccine seems not only specific but relative.

Etiology

Salmonella paratyphi A was isolated from enteric fever in man around 1898. It is the causative agent of enteric fevers, but not of acute gastro-enteritis in man. It is a gram-negative, non-sporing rod and belongs in the Salmonella group, of which there are now over 130 specifically named serologic types.[3] There are three different species commonly recognized as the cause of paratyphoid fever: S. paratyphi A, S. paratyphi B, and S. paratyphi C.

In our case the microorganism was isolated by blood culture and identified as being characteristic of paratyphoid A by biochemical studies and by the positive agglutinations with paratyphi antiserum which corresponds to the antigenic formula of Group A.

Symptomatology

Paratyphoid infections are defined as acute febrile diseases characterized by bacteremia. Paratyphoid fever, especially that due to paratyphi A, is clinically so similar to typhoid fever that a bacteriologic diagnosis must be made to differentiate the two diseases.

In as high as 85 per cent of the reported cases the onset of the illness has been gradual.[5] The fever is usually the single outstanding manifestation of the disease, but there is no typical fever curve. Syverton *et al.* found in their series that the average duration of fever was 33 days. However, there have been cases where the fever was known to have lasted as long as 99 days. In our case, the fever lasted for 40 days. There was an occasional low grade fever throughout the illness. As a general rule, the fever is out of proportion to the pulse rate and a relative bradycardia exists.

Other symptoms are malaise, headache, lassitude, and anorexia. These are sometimes accompanied by nausea and vomiting. The headaches may last until the fastigium is reached, but in our case the headache was the main source of complaint even after the temperature had been down to normal for several days. Retrobulbar pain has been mentioned as a surprisingly common finding.

Salmonella paratyphi A rarely causes gastrointestinal disturbances. In the present case a severe gastro-intestinal hemorrhage necessitated multiple blood transfusions to bring the patient out of shock. A majority of the cases also have splen-

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[1] Syverton, J. T., Ching, R. E., Cheever, F. S., and Smith, A. B.: Typhoid and Paratyphoid A, J. A. M. A. 131:507 (June 8) 1946.

[2] Longfellow, D. and Luippold, G. F.: Typhoid Vaccine Studies, VI. The Product of Cross-Immunity Between Members of the Typhoid-Paratyphoid Group of Microorganisms, J. Immunol. 45:249 (Dec.) 1942; Typhoid-Paratyphoid Vaccine, Am. J. Pub. Health. 33:561 (May) 1943; Immunization to Typhoid and Paratyphoid Fevers, Am. J. Hyg. 38:139 (Sept.) 1943.

[3] Wilson, G. S.: Principles of Bacteriology and Immunity, Williams and Wilkins, Baltimore, ed. 3, 1946. Jordan.[4]

[4] Jordan, O. E. and Burrows, W.: Textbook of Bacteriology. W. B. Saunders, Philadelphia and London. Ed. 14, revised. 1946.

[5] Andrets, N. F. and Baumstein, G. M.: The Symptoms and Clinical Course of Paratyphoid Fever A, Am. Rev. Soviet Med. 1:233 (Feb.) 1944.

omegaly. Leukopenia and eosinophilia were present in half of the cases studied. The sedimentation rate is usually elevated. The mortality rate is low and in the 300 cases reported occurring in the United States Infantry Regiment, there were no deaths.[6]

Diagnosis

The diagnosis of paratyphoid fevers usually depends on various laboratory procedures. Most investigators have found that the only dependable diagnostic procedures were those that were based on the cultures of blood, urine, and feces supplemented by serial blood agglutination reactions. The definitive diagnosis of Salmonella infection, however, rests on the immunological differentiation using the techniques of antigenic analysis.

The agglutination reaction as a single diagnostic criterion was found to be quite unreliable for distinguishing between the different types of enteric fever, or even for establishing the diagnosis at all in inoculated persons or in those who had previously had the disease. In fact, a single agglutination test may be misleading. The correct interpretation of a single agglutination test depends on several factors: 1) on the natural level of agglutinins in the particular area in which the test is made, 2) on the stage of the disease, and 3) on the history of previous immunizations with typhoid or T.A.B. vaccine. Studies are now being made to determine the level of agglutinins in Hawaii.

There is no particular titer which can be regarded as being "positive" or "negative" in a diagnostic sense. This fact was observed in the clinical experience of one of us (W.O.F.) Experience has shown that titers of typhoid O and H agglutinins vary widely and that only the relatively large fluctuations in the O titer are very suggestive. In this country a titer of 1:50 in H agglutinins or of 1:100 in O agglutinins in patients with no previous immunization or disease may be regarded as strong presumptive evidence of infection.[3] In the immunized group, or in persons with previous enteric infections, the H agglutinins are of little value as they may also be due to non-specific causes. On the other hand, if the O agglutinins are present in a titer of 1:100 or over, six months or more after inoculation, they are strongly suggestive of an active infection, particularly if on reexamination they are found to have altered titers. However, the most important single diagnostic procedure has been found to be the bacteriological culture of the blood when cases were seen within two weeks of the onset of illness.

[6] Krumwiede, C., Jr.: Fecal Examinations of a Regiment Infected with Bacillus Paratyphosus A, with Special Reference to Normal Carriers, Jour. Infec. Dis. 21:141 (Aug.) 1917.

Report of a Case

F. M., a 36 year old Filipino man, entered the hospital on November 22, 1948 complaining of fever and headache of two weeks duration. He was admitted for medical observation to determine the etiology of the fever.

He was first seen by one of us (W. O. F.) on November 4, 1948. His principal complaints at that time were frontal headache, cough, abdominal pain and generalized malaise of two days' duration. Chest x-ray was negative. General physical examination was non-contributory. Temperature was 101.8° F. He was given antibiotics, aspirin and a cough mixture. He continued to have headaches and a low grade temperature. He also complained of constipation. He had lost about ten pounds during his illness. Because of persistent headache and fever he was admitted to the hospital.

He had received immunization with T. A. B. vaccine in 1941-42 and a booster dose in 1944. Otherwise, the past history was non-contributory. He had originally come from the Philippine Islands in 1927.

Laboratory examinations showed a red blood count of 4,160,000 per cubic mm. with 10.6 gm. hemoglobin per 100 cc., a white-cell count of 4,750 per cubic mm. with 45 per cent polymorphonuclear cells, 24 lymphocytes, 28 stabs, 2 monocytes and 1 per cent eosinophiles. The blood agglutination reaction on day of entry showed titers of typhoid O as 1:130, typhoid H as 1:40, paratyphoid A as 1:160, paratyphoid B negative, and Proteus OX19 negative. Urinalysis showed a slight trace of albumin but was otherwise normal. Blood culture taken on Nov. 24, 22 days after the onset of the first symptoms, was positive for Salmonella. This was biochemically and antigenically identified as characteristic of paratyphoid A by the Territorial Board of Health Laboratory.

The patient was treated with sulfadiazine, sulfathiazole and sulfamerazine mixture, and parenterally with streptomycin without appreciable effect on the fever. There was no aureomycin available at that time. He had occasional mild epigastric pains and segments of a tapeworm were later found in his stool. He also continued to complain of persistent frontal headaches. On the eleventh hospital day (December 2) he had a severe gastro-intestinal hemorrhage and went into shock. He was given multiple blood transfusions, oxygen, anticoagulants and other supportive measures. He was also placed on oral streptomycin. His abdomen became moderately distended and Wangensteen suction was instituted. He gradually recovered from this episode. His fever finally became normal on the forty-first day of his illness. Only one stool culture, taken on December 13, was positive. Blood cultures on December 8, 9, and 11 were negative. Repeated urine cultures were negative for Salmonella. The agglutination titers of paratyphoid A and typhoid O went up as high as 1:640 plus on the twenty-seventh day of the disease. On the fifty-sixth day, the titers finally began to diminish. The patient was discharged asymptomatic on the thirty-sixth hospital day.

Summary and Conclusion

In the Territory of Hawaii the most common paratyphoid infection in children is the S. typhimurium in Group C, and in adults the S. montevideo and S. oranienburg in Group C, and the S. derby in Group B.[7] The paratyphoid B infections

[7] Personal Communication from the Territorial Board of Health, Honolulu, T. H.

are relatively rare in this area. The greater incidence of Group C infections may be due to the fact that the conventional T.A.B. vaccine lacks the paratyphoid C group component.

Immunization with the T.A.B. vaccines does not offer complete immunity from the salmonella infections. The history of immunization should not lull one into a false sense of security and into believing that the disease is not one of enteric fever.

The agglutination reaction as a single diagnostic criterion is unreliable and should be confirmed by other laboratory procedures. Experience has shown that the most reliable methods are cultures of blood, urine and stools. The definitive diagnosis lies in the isolation and identification of the microorganisms by the antigenic and biochemical analysis.

The usual antibiotics and chemotherapy had no effect on the disease. There was no aureomycin available.

Acknowledgment

We are indebted to the Territorial Board of Health for assistance in identifying the microorganism.

The Alsup Clinic.
The Queen's Hospital.

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[EDITORIALS]

COMPULSORY HEALTH INSURANCE COSTLY AND IMPRACTICAL*

DOROTHY THOMPSON

It seems certain that we are going to take another step on the road to bureaucratic collectivism by the passage of a compulsory health insurance bill, to which President Truman is pledged.

The United States Public Health Service is for it, as every Government agency is always for a vast extension of its powers. The labor unions and farmers' organizations are for it because it sounds good. Industry would like to saddle the Federal Government with the expense of workmen's compensation cases. Professional social workers foresee great opportunities for themselves. And a mere 150,000 physicians, 90 per cent of whom are against it, cannot buck the trend. Besides, they are supposed to be "prejudiced," on the current theory that those who know most about anything are not reliable witnesses.

Also, the opposition has not been intelligent. It has ranted against "socialization" as though the mere word had conjuring powers. Let this opponent, therefore, make herself clear. I am not against compulsory health insurance because it is "socialistic," but because it is the application of national socialism in the least appropriate field. Also, I have lived under such medical systems in England, Austria and Germany, and they were awful.

Cost Too Much

They cost the people far too much. They provide inferior services at a high price. They are incapable of dealing with really serious and complicated cases. They result in two sorts of medicine—good medicine for the well-to-do; and bad for the masses, at high cost to those who can least afford it. And they build up a vested interest of physicians and bureaucrats which the people will never get rid of.

The great joker in all these schemes is that they are put forward as "free," meaning something for nothing. Let their proponents at least tell the truth. What is advocated is compulsory insurance.

Every worker in this country will have the cost subtracted from his pay envelope, and added (by his employers) to the price of everything he buys. He will be paying for unused aspirins when he needs the money for oranges. He will be supporting innumerable filing clerks—a horrendous paper staff for 150,000,000 people. When and if he gets ill, he will find himself as one of 50 patients (half of them hypochondriacs bent on getting service for their money) whom a physician must examine in an hour!

And if he really is ill—and finds that under the slap-happy methods of overworked doctors, whose fees are assured anyhow, he gets not better but worse—he finally will, in desperation, consult one of those private physicians who refuse to join the assembly line and, atop all he already has put up, week by week, pay a private fee.

How do I know this? Because I have experienced it.

* From Miss Thompson's column, "On the Record," which appeared in *The Evening Star*, Washington, December 21, 1948; reprinted by special permission of Dorothy Thompson and The Bell Syndicate, Inc.

Better Service Needed

Just why this most inventive country seems compelled blindly to copy social measures originating elsewhere is baffling. We need many, many more hospitals. The existing hospitals need public aid, since the sources of private support are increasingly drained off in taxes. And we need more genuinely free medicine for people in real jams.

But before Congress passes any bill for universal sickness insurance—falsely called "health" insurance—it owes it to the American people to tell them exactly what a person with, say, an income of from $2,000 to $3,000 a year is going to have to pay over a working life of 40 years to take care of his illnesses, and just what services the Government positively guarantees him in return for his money. Will it, for instance, sign on the dotted line that if his wife is in labor, the Government guarantees a bed and a physician at the critical moment?

Don't make me laugh! I've lived under these schemes.

CROWNFLOWER KERATOCONJUNCTIVITIS – AND DERMATITIS?

The eye lesions produced by crownflower juice are described by Dr. Wayne Wong elsewhere in this issue. This interesting Hawaiian disorder is essentially an industrial accident which is largely limited to self-employed persons, i.e., lei makers, and which therefore rarely comes to the attention of the Workmen's Compensation Board.

The dermatitis said by Arnold[1] and Wong to result from contact with the milky latex (or sap, or both?) of this and other milkweeds raises an interesting question, namely, the difference between "contact dermatitis" (sensitization dermatitis due to contact, or dermatitis venenata) and "dermatitis escharotica." The former, two classic prototypes of which are poison ivy dermatitis and mango dermatitis, occurs *only in certain specially susceptible individuals after a previous contact has caused them to become sensitive* to the dermatitis-producing agent. The latter, a classic example of which is a "burn" induced by phenol or a strong acid, occurs in any person, whether previously exposed or not. It is clear that crownflower-juice keratoconjunctivitis is thought to belong to the latter category rather than the former; and it is implied that dermatitis due to the juice of this plant also belongs in the latter category.

[1] Arnold, H. L.: Poisonous Plants of Hawaii, Tongg Publishing Co., Honolulu, 1944, p. 31.

This brings up yet another question: the validity of what is "a well-known fact among" any sizeable group of people. If the milky juice of the crownflower is a skin irritant, it is odd that dermatitis of the eyelids, fingers and wrists of persons who pick the blossoms so rarely occurs—if, indeed, it occurs at all. If it is a primary irritant, it is odd that the skin of the writer and his three children is not affected by it. The subject might be worth investigating. Perhaps this white milky juice, like that of some other plants, is not as black as it has been painted.

H.L.A., JR.

TWENTY-FIVE PER CENT OR ONE-FOURTH?

Per cent, or per cent., or per centum, often written as %, means literally "in each hundred." If a thousand cases of plague occur, and a hundred die, the mortality is 10 (deaths) in each 100 (cases), or 10 per cent. If two hundred operations are performed, and two deaths result, the mortality is 1 (death) in each 100 (operations), or 1 per cent. If 100 neoplasms are removed, and 3 recur, the rate of recurrence is 3 in one hundred, or 3 per cent.

Most physicians are amused by the suggestion that if only one case is seen, and the outcome is fatal, the mortality is 100 in each 100, or 100 per cent. But surprisingly few of them think it is funny to say that 2 deaths out of 8 cases constitutes a mortality of 25 per cent, or, much less, that 20 deaths out of 80 cases justifies the same assertion. We're too familiar with our decimal system, and familiarity has as usual bred the proverbial contempt.

If 2 deaths occur in 8 cases, but the next 92 cases survive, the mortality in that series is 2 per cent, not 25 per cent; should the next 92 cases die, the mortality will be 98 per cent. So actually, 2 deaths among 8 cases do not justify the conclusion that there was 25 per cent mortality: all one can properly say is that the mortality lay somewhere between 2 and 98 per cent.

It is probably better to steer clear of the stylized medical gobbledygook and make the simple and understandable and defensible statement that the mortality amounted to "one-fourth" of the cases—or one-half, or one-eighth, as the case may be. The expression "per cent" should be reserved for the kind of groups it really refers to—groups of 100 or more individuals. Smaller quantities should be dealt with in terms of fractions, even at the risk of seeming less scientific and important.

LEPROSY LEGISLATION IN HAWAII, 1949

The leprosy control program in Hawaii, which has been striding forward so rapidly during the past fifteen years under the guidance of the Board of Hospitals and Settlement and their capable physicians, has been set back somewhat by two hasty and ill-advised pieces of legislation passed by the Twenty-Fifth Legislature.

The first of these revises our laws relating to leprosy by substituting the phrases "Hansen's Disease," "Hansen's Disease sufferer," and so on for leprosy and leprous patient. Happily, this change need not go beyond the phraseology of the law itself; but the implication that leprosy is so dreadful that its name should not even be printed is an unfortunate one and could be harmful. Progress in creating a sane public attitude toward tuberculosis was made by educating the public to accept it under its own proper name as just another contagious disease. It is doubtful whether the same progress could have been made had we insisted on calling it "Koch's Disease" or the like. And calling leprosy "Hansen's Disease" will merely puzzle those who don't know what it means, without bringing any particular comfort to those who do. "A rose, by any other name, would smell as sweet."

The second backward step, passed at top speed in the closing days of the session, dissolved the Board of Hospitals and Settlement as of June 30, turning its functions and employees over, lock, stock and barrel, to the Board of Health. As long as the medical members of the Board of Hospitals and Settlement were more versed or interested in leprosy than those on the Board of Health, it was obviously better to have a separate Board to administer the leprosy program. If this is not to be the case, quite possibly the Board of Health can conduct some phases of the program more efficiently than the smaller unit was able to do. If for any reason, however, this change disturbs the tenure of Dr. Norman R. Sloan, Medical Director of Kalaupapa Settlement, the Territory will be a long, long time regaining the ground it will have lost—if, indeed, it is ever able to regain it.

It is peculiarly unfortunate that this radical change in the administration of the leprosy control program should have been forced through the legislature right on the heels of an admirable Joint Resolution calling for an intensive and thorough two-year study of the whole program in all its aspects.

H.L.A., JR.

* * *

REQUIESCAT IN PACE

The National Physicians Committee for the Extension of Medical Service went out of existence on April 10, 1949, after ten years of activity against the proponents of socialized medicine. Its job has been taken over by the American Medical Association under the title of the National Educational Campaign of the American Medical Association.

Postgraduate Lecture Series, 1948

III. PATHOLOGY OF ICTERUS

PAUL KLEMPERER, M.D.*

An anatomic approach to the problem of icterus may seem antiquated, because modern physiologic and functional methods are probably more important in the clinical diagnosis; but it might be interesting to demonstrate and discuss certain anatomical features of more unusual instances of icterus and to see if we cannot find some interesting correlation between clinical observations and anatomical findings.

Icterus is a term applied to discoloration of tissues and body fluids by abnormal accumulations of bile pigments. If the discoloration is due to other substances, for instance, carotine, we speak not of icterus but of pseudoicterus. This distinction became an interesting problem during the first world war, when workers in munitions factories, engaged in the manipulation of picric acid, developed yellow skin; this was due to the absorption of picric acid and was not considered as icterus. But it was found later that in some instances picric acid produces liver damage.

If we had discussed the problem of icterus some three decades ago we would have placed the liver in the center of the whole problem because at that time it was believed that bile pigment was manufactured only in the liver and especially within the liver cells; knowledge of the reticulo-endothelial system had not been advanced at that time. Today we know that bile pigment is most probably manufactured not by the polygonal liver cells but mainly by the cells of the reticulo-endothelial system. I trust that you are familiar with these facts, which were first revealed by the investigations of the Aschoff school and extended by research in various places all over the world, in the United States particularly, by Mann and Magath. It is now believed that the liver cells are only engaged in the excretion of bile pigment, while its manufacture is a responsibility of the reticulo-endothelial system. Yet in the clinical discussion and consideration of icterus the liver is still the center of the problem because it is of utmost importance for the diagnosis and treatment of the icteric patient to ascertain whether the liver is affected or not and in what way it is implicated.

Functional Types of Icterus

Broadly speaking, we can say that the icterus problem centers about the cardinal question: where is the factor located which is responsible for the icterus; before, within, or after the liver cells? This question fully conforms with the accepted classification of icterus. Icterus is due either to overproduction of bile, the so-called hemolytic icterus; or to retention of bile pigment in the blood, as the result of inability of the liver cells to properly excrete the bile, retention icterus; or the icterus is due to obstruction of the excretory channels.

Histologic Types of Icterus

We may inquire whether these types can be differentiated by anatomical and histological examination. I shall show you first a few slides which illustrate that we are able to make a diagnosis of the type of icterus from histologic observations. This is important today because liver biopsy is frequently used in the diagnosis of icterus. The first slide is that of hemolytic icterus. It shows an abnormal accumulation of hemosiderin within the liver, which is evidence of increased destruction of hemoglobin. The hemoglobin is split into bilirubin and hemosiderin. The presence of large amounts of iron pigment in the liver, spleen or bone marrow denotes the hemolytic factor in a case of icterus. In obstructive icterus, as shown in the next slide, we find bile pigment accumulated within the liver cells and also within the Kupffer's cells. The liver cells, which you see, are not severely damaged upon examination with the conventional stains, hematoxylin and eosin. However, if one applies more intricate staining methods, particularly those for mitochondria, one will find definite changes in the liver cells, particularly in chronic obstructive icterus. The mitochondria disappear and we might even find numerous small areas of cell necrosis. This anatomical feature explains the occurrence of liver insufficiency in cases of long-standing icterus due to obstruction. In the next picture you see the evidence of severe destruction of liver cells which is characteristic of retention icterus.

We know, however, that there are cases of icterus in which the mechanism is not clearly revealed by histologic examination. Fortunately, such cases are not frequent. I have seen cases treated with thiouracil who developed extremely severe icterus; liver function tests did not give an answer as to the type of icterus, and the histologic examination of the liver was also of no avail. One could have demonstrated the liver as a perfectly normal organ. Of course, we have to consider that by examination of the mitochondria or of the Golgi apparatus we might have found disorganization of the cytoplasm which could not be seen with the conventional stains. Unfortunately such methods cannot be applied to autopsy material. One has to know however that they can be used in biopsy specimens and thus the nature of the icterus might be ascertained in obscure cases of jaundice.

Obstructive Icterus

I shall first demonstrate a few cases of obstructive icterus. The first picture illustrates an instance which is certainly very familiar to you, the obstruction of the bile duct by numerous stones. But it should be added that sometimes one finds stones in the large bile duct without icterus because these stones are not impacted. In this picture you see the impaction of a stone in the ampulla of Vater and the extreme dilatation of the bile duct. Today such cases are rare. In former years, however, patients who had been icteric for many years due to an impacted gall stone were frequently seen and showed a characteristic dark, almost black, color. Today the severest obstructive icterus is seen in the cases of common duct obstruction due to carcinoma.

I want to add a few words regarding non-malignant forms of obstruction which are rather uncommon, but have to be taken in consideration. Occasionally a chronic

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peptic ulcer of the duodenum may impinge upon the common duct and cause icterus. Another cause is the compression of the common duct by an echinococcus cyst, by gumma, by enlarged lymph nodes, for instance, as in Hodgkin's disease.

I should like to say a word regarding the hypothesis of compression of the common duct due to chronic pancreatitis. I have never been convinced of such an occurrence. I have observed at autopsy cases of icterus which had been attributed to chronic pancreatitis, but in which parenchymal damage of the liver was the actual cause.

Carcinoma

Carcinoma obstructing the common duct may originate in the pancreas, or in the duct itself. The carcinoma may be situated on the duodenal aspect of the papilla or originate within the ampulla. It is known that icterus due to obstruction of the papilla of Vater by carcinoma may be of intermittent type. Sometimes the carcinoma ulcerates and this relieves the obstruction for a while. It might be worthwhile mentioning that one should look for carcinoma cells in aspirated duodenal contents in cases of clinically obscure obstructive jaundice. Then it should also be mentioned that a papilla carcinoma may be present without complete obstruction. The incomplete obstruction causes an ascending infection of the liver and the chronic infection may dominate the clinical picture without severe icterus. We observed only recently such a case, in which the patient had symptoms of a septicemia fourteen months before he died, but only in the last month of his illness did icterus became evident. We shall now consider a case in which the carcinoma is located in the ampulla of Vater. This carcinoma originates in the mucosa of the common duct. The lumen is strikingly dilated, which is sufficient evidence of obstruction. Such cases are easily diagnosed on surgical exploration. If we consider the next picture, however, we see that the obstructing carcinoma is located high up in the main hepatic duct and the terminal portion of the common duct seems perfectly normal. In such an instance, surgical exploration might not reveal the existence of the carcinoma. This is shown in the next picture. The patient was explored about eight months before he died, and the cause of icterus was not ascertained. You see the width of the common duct is perfectly normal, but at the hilum of the liver there is a small annular carcinoma which completely obliterates the lumen. In some cases a carcinoma may originate in one of the large hepatic ducts and gradually encroach upon the bifurcation. Such cases start with mild icterus which gradually deepens and finally becomes complete.

Echinococcosis

The next series of photographs will illustrate a condition which is not of great frequency but is of considerable importance. Many years ago I autopsied a case of icterus of long duration. When we explored the common duct we found it obstructed by a mass which we diagnosed as carcinoma. However, the histological examination did not disclose a malignant tumor but revealed a peculiar granulation tissue which puzzled us very much. Finally, we recognized this to be due to alveolar echinococcus. Histologically, you see a peculiar granulation tissue with giant cells resembling tuberculosis. In other parts of the section, however, you see the typical hyaline membranes of alveolar echinococcus. This parasite is not frequent, neither on the mainland nor in any other part of America. It is however not uncommon in Europe, particularly in the Western part of Germany which was occupied during the first as well as the second world war. In Baden, Germany, for instance, alveolar echinococcus is quite common and familiar to the German pathologists. It provokes a striking infiltration of the liver which might be mistaken for carcinoma. Kaufman's textbook shows a classical picture. Interestingly, the case here demonstrated, and another one which I saw only a few months ago, occurred in veterans who had been stationed in this area of Germany during the war.

Intrahepatic Cholangiitis

So far I have discussed obstructive icterus in which the common duct or the main hepatic ducts were obstructed. We shall discuss now another type of obstructive icterus in which the occluding factor is not so simply ascertained. The next pictures come from the autopsy of a woman who first was operated upon in 1917 at another hospital for chronic cholecystitis. In 1921 the patient entered Mt. Sinai Hospital with the symptoms of obstructive jaundice, with clay-colored stools. Dr. Edwin Beer, the chief surgeon, believed that an injury of the common duct had occurred at the preceding operation and decided to operate. On exploration he thought he found a stenosis of the common duct, and drained it. The patient improved, although her icterus did not completely disappear. She was discharged in excellent general condition. She returned one and one-half years later with severe icterus; she stated that she had never been entirely free of jaundice and that she had had occasional attacks of increasing jaundice. She had noticed fever during these periods. She was again operated upon and drained. Again she improved, but was not without icterus when she left the hospital. All the time it was assumed that she had a cicatricial obstruction of the common duct due to the previous operation. Finally she was admitted to the medical service with severe jaundice and splenomegaly. She died of a severe hemorrhage. The diagnosis of the medical service was splenomegalic cirrhosis, probably Hanot's cirrhosis. At autopsy the common duct was found to be of normal caliber. You see in the picture that the large intrahepatic ducts are not dilated, which contradicts a distal obstruction. The liver was icteric but not cirrhotic. These gross findings could not explain the reason of the obstructive icterus, and we could not understand the case until we saw the histologic sections. I show you only one representative picture because every section showed the same alteration. You see here a periportal field. In these areas of the liver we find normally three characteristic structures: the ramification of the portal vein, a branch of the hepatic artery, and an intrahepatic bile duct. This last, here, we cannot recognize. Instead of an open lumen we see a cord-like structure which is the completely occluded intrahepatic biliary duct. We are dealing here with a condition of intrahepatic obstructive cholangiolitis. German clinicians have been aware of this condition and have referred to it as cholangiitis lenta. Schottmueller first described this entity. He cultured streptococcus viridans from the liver in one of his cases and for this reason he applied the name cholangiitis lenta by analogy with streptococcus viridans infections of the cardiac valves which he had termed endocarditis lenta, the subacute bacterial endocarditis of Emanuel Libman. Since the observation of this first case I have encountered several other instances; in some of these a biopsy of the liver was performed. The next picture comes from such an observation. It was a case with a similar history: there was recurrent icterus and each recurrence was associated with temperature elevation.

Biopsy in this case showed narrowing of the intrahepatic biliary ducts, which were surrounded by inflammatory cells including numerous polymorphonuclear leucocytes. This patient came to autopsy three years after the onset of icterus; during his observations on the wards all liver function tests spoke for obstructive icterus. At necropsy the liver was firm, green, and granular, showing the picture of a biliary cirrhosis. The other organs presented features of Laennec's cirrhosis, such as splenomegaly and esophageal varices, the patient dying of hemorrhage from rupture of these dilated veins. The chronic cholangiitis, therefore, may terminate with the picture of biliary obstructive cirrhosis, which has been known for many years to be the end result of longstanding obstruction of the common duct by stones. This pathological entity was produced experimentally by Charcot and Gombault by ligation of the common duct. In cases of intrahepatic obstruction of the small bile ducts the appearance of the liver might be identical, but on exploration of the large duct one does not find dilatation. The site of the obstruction is within the ramifications of the intrahepatic bile ducts. It is evident from the discussion of the first case that surgical drainage of the common duct may cause some retardation of the morbid process, but nevertheless it gradually progresses to a fatal issue. Today, with the opportunity of using antibiotics, it seems important to call your attention to such cases of chronic recurrent intrahepatic cholangiitis. I think one would be justified in trying penicillin or streptomycin therapy in the hope of influencing the infection of the intrahepatic ducts. The knowledge of this form of cholangiitis is of clinical importance. I might add a point that is more of academic interest. It is my belief that Hanot's cirrhosis, which is so puzzling a disease, might be nothing else than chronic obstructive intrahepatic cholangiitis.

Retention Icterus

Acute Yellow Atrophy

I come now to that group of liver disease causing icterus in which the liver cells are primarily affected. The classical type is the acute yellow atrophy which was described by Rokitansky more than a hundred years ago. The macroscopic picture which I will present does not convincingly reflect the actual appearance at autopsy. Rokitansky recorded in his original description that the liver "is melting away," and this term well denotes the condition and consistency of the liver, which of course cannot very well be recognized in a picture. The next slide will show you another feature, namely the evident inability of the liver to excrete bile. The gall bladder in the greater number of cases of a few days' duration contains white bile. Today in civilian practice we rarely see cases of fulminating acute yellow atrophy which were seen by the older pathologists. However, during the war, when the military surgeons and pathologists had the opportunity to observe fatal cases of infectious hepatitis, they recognized the same picture which was classically seen in previous years. This indicates that infectious hepatitis in its fatal issues produces anatomical lesions which are indistinguishable from the classical acute yellow atrophy of Rokitansky.

In the first period the destruction of the liver parenchyma dominates the picture; there is not much fat infiltration and the yellow color of the liver is in the main due to icterus. A few weeks after the onset of icterus the liver becomes red, and we speak of red atrophy. The first histological slide shows the acute state of yellow atrophy, to which at the present time the term diffuse necrosis of the liver has been given. You see in this liver lobule all cells without nuclei, which indicates necrosis. In the next slide there is also absence of liver cells. In addition, however, there is striking dilatation of the capillaries. This distention of the capillaries which follows the primary destruction of the liver explains the macroscopic picture of red atrophy. Moreover, one sees on histological examination infiltration with lymphocytes, polymorphonuclear leucocytes and histiocytes. This infiltration, which can be seen after the primary destruction of the liver cells, is an indication of beginning repair. As evidence that in acute yellow atrophy only the liver cells are destroyed, and that the framework of the liver is not affected, I present this silver stain, which shows that the reticulum fibers of the liver are perfectly normal. Acute yellow atrophy is therefore a classical example of a pure hepato-cellular disease.

In the later stages of the disease, that is after the fourth week of icterus, there is more inflammatory reaction and at the same time one observes parenchymal regeneration, which originates from the remainder of the liver cells which have escaped the original catastrophic destruction and possibly from the bile ducts. It is probable that the inflammatory features seen in the later phases are the forerunners of the cirrhotic picture which is seen in some cases which have survived the acute liver necrosis.

The next picture shows the late stages of the disease, this case dying seven months after the onset of icterus. The appearance of icterus denotes the beginning of liver destruction. We see in this picture smooth areas on the surface which represent parenchymal portions in which the liver cells have been completely destroyed. In addition, however, you see adenomatous nodules representing regenerated liver parenchyma. This is a case in which the adenomatous hyperplasia has not reached marked dimension. If a case of liver atrophy survives, however, for years the picture is different, and what we encounter at the autopsy table is well represented in the next specimen. There are large nodules of regenerated liver tissue and, in between, areas of apparent fibrous tissue which has developed between the islands of adenomatous hyperplasia.

Toxic Cirrhosis

We have cases in which regeneration and repair has advanced to such an extent that the anatomic picture resembles that of an actual cirrhosis. This type of cirrhosis, however, differs from the typical Laennec's cirrhosis by the fact that the nodules are very coarse and therefore they were first described as "coarse nodular cirrhosis," while Marchand referred to them as adenomatous hyperplasia. Mallory in this country has paid much attention to this condition and has applied the term "toxic cirrhosis." Therefore we understand by the term toxic cirrhosis a morbid process of the liver which is secondary to a diffuse necrosis of the liver cells. Rarely do we observe cases in which icterus preceded the death of the patient by many years. As a rule, what we call toxic cirrhosis is the end stage of a process which has started several months before and has proceeded without remission to a fatal issue. In all my experience in civilian hospitals, and I emphasize, civilian experience, I have seen only 2 cases of this type which were discovered accidentally at autopsy. Upon inquiry from the family it was found that in both cases the patient had been icteric ten and fifteen years before, respectively,

but had completely recovered. This seemed to provide evidence that a transient and non-fatal icterus may be associated with severe liver damage which, however, may be compensated by regeneration of the liver, causing the picture of toxic cirrhosis. It is of great importance that this possibility be kept in mind, because during the war there were thousands of cases of transient infectious hepatitis, and such patients are possibly candidates for this type of liver cirrhosis; but we must emphasize that we are not certain at all how often this may occur.

I show the next slides because they reveal the occasional difficulties in the differential diagnosis between Laennec and toxic cirrhosis. The lower surface of the liver in this case looked like a Laennec's cirrhosis. The upper surface, however, showed flat depressed areas and large nodules, and this appearance contradicts the diagnosis of Laennec's cirrhosis. On cross-section one sees extended areas of atrophic liver tissue in which a few nodules of liver parenchyma may still be seen. On the strength of these findings one can definitely make the diagnosis of toxic cirrhosis. This case showed classical features of portal hypertension, namely splenomegaly and marked distention of the esophageal veins; he finally died of rupture of one of these varices. The next picture is from a case of Laennec's cirrhosis with typical hob-nail surface. The next picture shows the same but with adenoma formation.

We have recognized the difference in the gross anatomy of these two types of cirrhosis. We believe that the pathogenesis is also different. In a general way one might say that in toxic cirrhosis the original liver cell destruction seems to have been catastrophic and extensive, while the pathogenesis of Laennec's cirrhosis could be explained by slowly progressive but constantly repeated cell destruction. Cell disintegration is the common pathogenetic factor of both forms of liver cirrhosis.

There is in my opinion no question but that Laennec's cirrhosis is also due to a primary parenchymal damage and is not the result of a primary implication of the stroma. This belief I think is supported by the investigations of the last ten years of experimental production of liver cirrhosis in rats by a low protein diet. If one conducts such experiments for a period of months one can produce a picture of cirrhosis very similar to that of Laennec's cirrhosis. If one sacrifices animals for histological examination at earlier periods one can see that there is constant destruction of individual liver cells, but large areas are not affected. If on the other hand one uses liver poisons like chloroform, or carbon tetrachloride, one produces areas of extensive destruction. This is probably also the main difference in the pathogenesis of human toxic and Laennec's cirrhosis, at least as far as we can conclude from the morphogenetic point of view. As to the etiology of the catastrophic liver destruction the investigations of recent years have proved that a virus has to be considered as well as chemical toxic agents.

Catarrhal Jaundice

We now come to the discussion of catarrhal jaundice and its relation to infectious and serum hepatitis. Up to the turn of the century it was accepted that catarrhal jaundice is due to a mucous plug obstructing the common duct. This was accepted on the authority of Virchow who was supposed to have found this mucus plug at the autopsy of a case of catarrhal jaundice. If one however takes the pain to read Virchow's original article one finds that Virchow did not report upon a case of catarrhal jaundice but on a case of sepsis with jaundice. Mucus plugs subsequently were used as an explanation for all mild forms of jaundice of relatively short duration in which no other cause could be ascertained. During world War I epidemics of icterus were observed in the armed forces of all the warring nations and the clinical similarity between these cases and the sporadic instances of catarrhal jaundice became evident. This form of infectious hepatitis seemed to be the epidemic form of sporadic catarrhal icterus and a similar pathogenetic mechanism was assumed to exist.

During 1918 Eppinger had the opportunity of observing at autopsy 3 soldiers who had belonged to a combat unit in which epidemic icterus was prevailing. These soldiers had died of tetanus, but they had been jaundiced. Eppinger found scattered liver cell necrosis upon histological examination and referred to the hepatic lesions as acute yellow atrophy *en miniature*. His findings were noted but their general significance for the problem of catarrhal icterus was not recognized. It was also objected that his cases had died of tetanus and that the tetanus had been responsible for the liver changes.

It was therefore rather fortunate that in 1926 Dr. Charles Gordon Heyd in N.Y. Post Graduate Hospital operated on a patient who had been jaundiced for four weeks. The icterus did not improve. Although most of the attending physicians believed that it was a catarrhal jaundice, Heyd did not want to neglect the possibility of a common duct stone and performed an exploratory laparotomy. On opening the abdomen he found no evidence of obstruction and removed a small piece of the liver for histologic examination. In this small fragment of the liver we found areas of complete atrophy. Since it was four weeks after the onset of icterus, acute changes were not striking but still evident. This observation of continued liver cell destruction is of significance because we know today that hepatitis of viral origin may continue even without icterus. On the strength of the histological findings, which were subsequently confirmed by other authors, we concluded that Eppinger had been perfectly correct and that these destructive hepatic lesions are the anatomical pattern in both the epidemic and the sporadic form of hepatitis, or so-called catarrhal jaundice.

Infectious vs. Serum Hepatitis

During World War II, great interest arose because of the occurrence of many thousands of cases of epidemic icterus. It is familiar to you, I am sure, that at the beginning of World War II, subsequent to vaccination of a large number of Armed Forces with yellow fever vaccine, an icterus epidemic occurred in which thousands of soldiers were affected. The great majority of the cases presented the clinical picture of a relatively mild icterus; but of the thousands who had been exposed to the yellow fever vaccine, 66 men died. At autopsy each one of these showed the picture of classical acute yellow atrophy.

A number of the soldiers who had completely recovered from the icterus died subsequently, some of them in accidents. Dr. Lucke examined these patients at autopsy and found that their liver was mostly normal. In the light of our present experience we can say that this was an epidemic outbreak of serum hepatitis.

During the campaign in North Africa and Italy epidemics of icterus were observed which could not be traced to a similar cause. These are the cases referred to as infectious hepatitis. On the mainland we see at

present both serum and infectious hepatitis. The former is unfortunately not rare; this is due to the fact that the selection of blood donors has become very difficult. Obviously one would exclude as donors those who give a history of jaundice, but prospective donors may harbor the virus of serum hepatitis without showing clinical evidence of disease.

One must be alert to the existence of serum hepatitis, and I should like to illustrate the problem with the demonstration of the following case. An elderly gentleman came to the hospital in November 1946 with icterus. After complete examination it was found that he had a cholecystitis with a common duct stone. He was operated and an empyema of the gall bladder with cholelithiasis was found. The gall bladder was removed, and the patient made an uneventful recovery. He left the hospital in November 1946 in excellent health. At the end of January 1947, he returned to the hospital with icterus. He was carefully examined; all liver function tests were performed but they were equivocal. It was finally decided that he should be re-operated upon because of the probability of common duct stones which had not been noted during the first operation. A competent surgeon explored the common duct up and down. The patient died postoperatively. At autopsy there was no evidence of common duct occlusion. On histologic examination we found scattered areas of liver cell destruction. When this was seen I inquired if the patient had ever had a blood transfusion. Indeed, he had been transfused at the time of his first admission, two months previously. We have seen two more autopsy cases with relatively mild liver damage, subsequent to transfusion, but we also saw 5 cases of fatal acute yellow atrophy, 4 following the use of plasma and 1 subsequent to full blood transfusion.

As to the present status of our knowledge of the etiology of these two forms of icterus, we are better informed regarding the infectious form because experiments are more easily performed. There are no animals available at the present time to which the virus can be transmitted; only shortly before I left the mainland I heard that canary birds might prove to be susceptible to experimental infection. Other animals, however, particularly mammalians, do not contract icterus and are therefore of no avail in experimentation; but there has been the opportunity of using human volunteers. These experiments have shown that the virus of infectious hepatitis can be transmitted by feeding as well as by parenteral injection. The virus of serum hepatitis can be transmitted only by injection. A fact which speaks against the identity of both viruses is that there is no cross-immunity; a subject who has been infected with infectious hepatitis can still be infected with the virus of serum hepatitis.

All these investigations are of great importance but not all the facts have yet been revealed. What we can conclude today is that acute yellow atrophy and particularly the milder clinical forms referred to as catarrhal icterus are in part at least of viral origin. Whether all the cases are caused by virus and what role chemical factors play is not yet fully understood. We know, of course, that certain chemical compounds such as phosphorus, chloroform, carbon tetrachloride, and others may provoke the picture of liver necrosis. One is often able to differentiate histologically between the genuine hepatic yellow atrophy and chemical liver necrosis. There remains however still a considerable amount of investigation. I think that we have in the anatomic findings a certain lead which will be helpful in experimental research.

COUNTY SOCIETY REPORTS

HAWAII COUNTY MEDICAL SOCIETY

The 281st regular meeting of the Hawaii County Medical Society was held in the staff room of the Hilo Memorial Hospital on February 10, 1949. The meeting was called to order by the present, Dr. L. R. Fernandez. Members present were: Drs. Leo Bernstein, S. R. Brown, M. H. Chang, W. T. Chock, L. R. Fernandez, R. S. Fillmore, S. M. Haraguchi, S. Kasamoto, W. Loo, R. M. Miyamoto, C. L. Phillips, H. M. Sexton, Henry B. Yuen. Guests present: Dr. Norman Sloan, Dr. C. L. Wilbar, Jr., Mr. Harold Stein.

Dr. Norman Sloan, Resident Physician at Kalaupapa, presented an illustrated lecture on the "Diagnosis and Treatment of Leprosy."

* * *

A special scientific meeting was held in the staff room of the Hilo Memorial Hospital on March 1, 1949. The meeting was called to order by the secretary, Dr. Leo Bernstein, at 8:00 p.m. Members present were: Drs. L. Bernstein, M. H. Chang, M. L. Chang, S. M. Haraguchi, J. T. Jenkin, S. Kasamoto, H. B. Yuen. Guests present were: Dr. John Lynn, Dr. Pauline Stitt, Miss Willa Murray.

Dr. John Lynn discussed "The Social and Emotional Development of The Child."

* * *

The annual meeting, the 282nd regular meeting of the Hawaii County Medical Society, was held at the Honokaa Club Hotel on March 26, 1949.

A letter from Dr. Phillip Chock who is studying on the mainland was read. Dr. Chock requested a leave of absence or resignation from the Society if dues and assessments could not be waived. It was moved by Dr. A. Orenstein, seconded by Dr. H. Yuen and voted unanimously that Dr. Chock's resignation be accepted in order to avoid financial obligations and that the Constitution and By-Laws be amended to permit a waiver of the initiation fee upon the readmission of members who resign to pursue further studies or because of sickness. The Secretary was instructed to send an explanatory letter to Dr. Chock. A similar letter was requested for Dr. Arimizu who has been on a leave of absence for some time.

It was moved by Dr. A. Orenstein, seconded by Dr. H. Yuen and voted unanimously to approve with regret the request of Dr. H. Sexton for transfer of membership to the Honolulu County Medical Society on May 1, 1949.

It was moved by Dr. A. Orenstein, seconded by Dr. W. Loo and voted unanimously to elect Dr. L. L. Sexton into honorary membership in the Hawaii County Medical Society upon his resignation from regular membership on June 1, 1949. Plans for a dinner meeting in honor of Dr. Sexton were discussed.

Dr. Pete Okumoto was elected unanimously by secret ballot as a member of the Society.

The following resolution was unanimously adopted upon the motion of Dr. W. Bergin, seconded by Dr. H. Sexton:

"BE IT RESOLVED, that the Hawaii Medical Service Association, a non-profit Association, be requested to cause its Constitution and By-Laws, insofar as the same relate to the composition of its Board of Directors, to be amended to provide that the representatives of the medical profession on its Board of Directors be designated by the several county medical societies, and to permit the Hawaii County Medical Society to name one of its members to serve as a member of said Board of Directors, and to serve for a period of two years."

The President expressed the appreciation of the Society to Dr. H. E. Crawford and Mr. R. Savio for accepting the invitation from the Hilo Kiwanis Club to participate in a debate on the "Forum of the Air" opposing compulsory health insurance.

The Nominating Committee presented the following nominations for officers of the Hawaii County Medical Society for the year 1949-1950:

President.....DR. GEORGE TOMOGUCHI
Vice-President.....DR. LEO BERNSTEIN
Secretary.....DR. ROBERT MIYAMOTO
Treasurer.....DR. SAMUEL HARAGUCHI

It was moved by Dr. A. Orenstein, seconded by Dr. C. Carter and voted to close the nominations and instruct the Secretary to cast a unanimous ballot.

Nominations were received from the floor for Delegates and Alternate Delegates. Drs. W. Seymour and L. Bernstein were elected delegates, and Drs. H. Okada and T. D. Woo, alternate delegates.

LEO BERNSTEIN, M.D.
Secretary

HONOLULU COUNTY MEDICAL SOCIETY

The regular monthly meeting of the Society was held in the Mabel Smyth Auditorium March 4, 1949; 73 members were present. Doctor Clarence T. Simon, Professor of Speech at the University of Hawaii, discussed language difficulties in childhood.

The Society approved a letter from Dr. Robert Faus asking Dr. Howard of the Council on National Emergency Medical Service of the A.M.A. to inform us what Hawaii's quota of doctors should be at this time.

It was announced that the Budget Committee had found the Society's finances in unsound condition, and the following proposed amendment to the By-Laws was read:

"Chapter 6, Section 2. a. The annual dues of regular members for each fiscal year, and the method of their payment, shall be fixed by action of the Society at the last regular meeting of the preceding fiscal year."

The Budget Committee then presented two proposed alternative budgets for consideration and final action at the April meeting. The budgets were discussed at length in both principal and detail.

Dr. Majoska presented a report of the activities of the joint legislative committees of the Hawaii Territorial Medical Association and the Honolulu County Medical Society, and the joint committees were authorized by vote to act as the Honolulu County Society's spokesman in regard to health legislation.

Dr. J. Robert Jacobson of the staff of the Territorial Hospital gave a talk entitled Psychobiological Problems in Childhood and presented three successfully treated sample cases. Dr. L. G. Phillips discussed the background and history of the controversy regarding the Pratt-Jacobson program in the public schools, and Dr. John G. Lynn IV gave a critique of the methods used in the program.

A special meeting of the Honolulu County Medical Society and Oahu Dental Society was held Wednesday, March 9, 1949, at 7:30 p.m. in the Mabel Smyth Building.

About 33 physicians and 32 dentists were present including Dr. Boyden (Kauai), Dr. Rockett (Maui), Dr. Harold Sexton (Hawaii) and Dr. L. W. Colton, D.D.S. and Dr. Edward H. Goo, D.D.S., from Maui.

The chairman explained that this special meeting was called to outline to the physicians and dentists the plan of the new public relations educational campaign and also to explain to the physicians how their $25 A.M.A. assessment is being used.

Mr. Claude Jagger, president of the Hawaiian Economic Foundation, gave a talk entitled Public Attitudes Toward the Medical and Dental Professions.

Dr. F. J. Pinkerton gave a resume of the A.M.A. meeting in Chicago on February 12 and 13.

Dr. Harry I. Kurisaki, president of the Territorial Dental Association gave an outline of the program of the American Dental Association in relation to the A.M.A.'s program.

Dr. Arnold, Jr., explained what the A.M.A. plans to do with the $25 assessment.

Dr. Phillips spoke on what he termed a "Self Analysis of the Profession."

Dr. Majoska reported on what is being done by the joint legislative committee of the Honolulu County Medical Society and the Hawaii Territorial Medical Association in regard to health bills or any other legislation that in any way pertains to the professions.

A questionnaire was circulated at this meeting regarding legislative information, distribution of pamphlets, etc., and the formation of a speakers' bureau.

Dr. Giles discussed the importance of the various county societies, clubs, etc., interested in health, lay groups and others drawing up resolutions to be sent to their legislators, the President of the United States, and to Delegate Farrington in order to make our stand known to these people.

SAMUEL L. YEE, M.D.
Secretary

The annual meeting of the Honolulu County Medical Society was held April 1, 1949, in the auditorium of the Mabel Smyth Building. About 155 members were present. A movie on breast cancer was shown. Reports of committee chairmen and other officers were read and approved.

Of particular importance were the reports of the Budget Committee and Treasurer. The Budget Committee made the following recommendations:

1. The Honolulu County Medical Society shall maintain its business on a "pay as you go" basis.
2. The newly elected officers and the new Board of Governors shall decide how to invest, keep or use the monies on hand as of February 28, 1949.
3. The dues of regular members shall be increased from $60.00 to $75.00 per year.
4. The dues of institutional members, whose sole income is from their salary, shall be increased from $30.00 to $37.50 per year.
5. The By-Laws shall be amended to provide for elimination of the $50.00 initiation fee.

These recommendations were accepted without dissent, and the By-Laws were then amended as proposed at the previous meeting to permit the dues to be changed. The following budget was proposed and adopted by the membership:

ITEM, DEBIT	SPENT 1948-49	BUDGET 1949-50
Library	$ 8,000.00	$ 7,000.00
Salaries	6,344.00	4,200.00
Territorial Association (dues and Journal)	4,692.00	6,182.00
Postgraduate education	2,553.00	.....
Nursing Service Bureau	1,200.00	600.00
Rent, Mabel Smyth Building	720.00	720.00
Telephone and radiograms	225.78	250.00
Mimeographing and printing	25.00	300.00
Supplies	456.74	425.00
Postage	261.13	300.00
Taxes	170.54	.....
Entertainment	299.29	200.00
Audit and legal	225.00	250.00
Miscellaneous	186.63	200.00
Furniture and fixtures	171.50	50.00
Advertising	75.72	75.00
Chamber of Commerce dues	.....	40.00
TOTAL	$25,904.36	$21,042.00

ITEM, CREDIT	INCOME 1948-49	BUDGET 1949-50
Hospitals (service to indigent patients)	$ 238.18	$ .....
Dues	16,812.00	20,535.00
Miscellaneuos income	254.06	257.00
TOTAL	$17,518.74	$21,042.00

The Secretary reported a total membership of 323, consisting of 281 regular members, 17 honorary members, and 9 non-resident, 7 retired, 4 life and 1 service member.

Dr. Gotshalk read the following proposed amendment to the By-Laws, changing the last sentence of Chapter 5, Section 4, to read as follows:

"It [the Nominating Committee] shall prepare a list of nominations for all elective offices in the Society and the nominations shall be circulated to the general membership at least 7 days before the annual meeting."

The annual election of officers was then held, with numerous nominations from the floor for nearly every office, and the following were elected to office by written ballot:

President: DR. HARRY L. ARNOLD, JR.
Vice-President: DR. SAMUEL L. YEE
Secretary: DR. JOHN DEVEREUX
Treasurer: DR. WILLIAM WALSH
Board of Governors (for two years)
DR. WILLIAM ITO
DR. JOHN FELIX
DR. RICHARD DURANT
Alternates, Board of Governors (for one year)
DR. ALVIN MAJOSKA
DR. TORU NISHIGAYA
DR. ROBERT BENSON
Board of Censors (for three years)
DR. MON FAH CHUNG
Delegates, H.T.M.A. (for two years)
DR. SAMUEL L. YEE
DR. JOHN BELL
DR. H. C. GOTSHALK
DR. FRANK C. SPENCER
DR. L. A. R. GASPAR
DR. S. NISHIJIMA
Alternate Delegates, H.T.M.A. (for two years)
DR. C. M. BURGESS
DR. EDWARD CUSHNIE
DR. K. S. TOM
Representatives to H.M.S.A. (for two years)
DR. RICHARD DURANT
DR. THOMAS RICHERT
DR. HERBERT ROTHWELL
Committee on Forms of Medical Practice (for five years)
DR. H. C. GOTSHALK

It was voted that the Territorial Association be requested through its Council to submit its annual meeting agenda and its nominees for election to office to the

Board of Governors of the Honolulu County Medical Society at their next meeting, and also to the other component county societies.

A proposed amendment to Chapter 1, Section 2.b.4. of the By-Laws was read, as follows:

"Interne membership shall terminate when the member is no longer in interne or resident service."

It was voted that the Board of Governors instruct the Society's delegates to the H.T.M.A. as to the Society's wishes prior to the annual meeting of the Association.

The meeting was adjourned after a brief message from the new president.

JOHN W. DEVEREUX, M.D.
Secretary

KAUAI COUNTY MEDICAL SOCIETY

The regular monthly meeting of the Kauai County Medical Society was held at the Wilcox Memorial Hospital in Lihue on January 12, 1949. Members present were: Drs. Bickell, Boyden, Brennecke, Chisholm, Cockett, Fujii, Goodhue, Ishii, Kuhns, Mason, Masunaga and Wallis. Dr. Steuerman, resident physician at the Wilcox Memorial Hospital, was present as guest.

It was moved, seconded and unanimously resolved that charges for letters of information be payable by the insurance company and a fee of $3.00 be charged per form. The secretary was instructed to communicate with Mrs. Edith C. Bennett, Executive Secretary of the Hawaii Territorial Medical Association concerning this.

The question of a $25.00 assessment per capita levied on each A.M.A. member was discussed. It was moved, seconded and carried that the Treasurer forward the sum of $350.00 for fourteen active members at $25.00 per member to the Hawaii Territorial Medical Association.

* * *

The regular monthly meeting of the Kauai County Medical Society was called to order by President Cockett at the Kauai Inn on March 9, 1949, in Lihue. Members present were: Drs. Bickell, Brennecke, Cockett, Fujii, Goodhue, Ishii, Kuhns, Masunaga, Wade and Wallis. Guests present were: Dr. Mildred Trotter, Professor of Gross Anatomy, Washington University, St. Louis, Mo., who is now with the Army Central Identification Laboratory in Hawaii, and Dr. Steuerman, resident physician at the Wilcox Memorial Hospital in Lihue, T. H.

President Cockett presented Dr. Trotter who gave a very interesting dissertation to the members, wives and guests on her work with the Army in Hawaii.

A letter from Noboru Miyake, Representative of the Sixth District of the Hawaii Territorial Legislature, concerning the establishment of a County Hospital on Kauai was read. It was unanimously carried that the Kauai County Medical Society is in favor of this and that the Secretary inform Mr. Miyake of our approval.

The question of a voice in the management of the Hawaii Medical Service Association was brought up and discussed. It was moved, seconded and unanimously resolved that the Secretary inform the Hawaii Medical Service Association of the following:

"BE IT RESOLVED, that the HAWAII MEDICAL SERVICE ASSOCIATION, a non-profit association, be requested to cause its Constitution and By-Laws, insofar as the same relate to the composition of its Board of Directors, to be amended to provide that the representatives of the medical profession on its Board of Directors be designated by the several County Medical Societies, and to permit the Kauai County Medical Society to name one of its members to serve as a member of said Board of Directors, and to serve for a period of two years."

The following members were nominated and unanimously elected to serve as officers of the Kauai County Medical Society for the year 1949-1950:

President.....DR. E. MASUNAGA
Vice-President.....DR. W. W. GOODHUE
Secretary-Treasurer.....DR. J. MASON
Board of Censors.....DR. M. A. BRENNECKE
(Term to expire in 1952)
Delegate.....DR. B. O. WADE
Alternate Delegate.....DR. A. W. BOYDEN

President Cockett spoke to the members on the passing of Dr. David Liu, a well liked and admired colleague. The members of the Kauai County Medical Society extend their deepest sympathy to the family of the late Dr. Liu.

W. W. GOODHUE, M.D.
Secretary

MAUI COUNTY MEDICAL SOCIETY

The Maui County Medical Society met at 7:30 p.m., March 15, 1949, at Kula Sanitarium. Members present: Drs. Kanda, Patterson, Rockett, Jim, Izumi, Cole, Haywood, H. Kushi, Kashiwa, Burden, Shimokawa, Fleming, Toney, Tofukuji, Sanders, Tompkins, Beland and Underwood. Guest: Dr. Ferkany.

A letter from Dr. Reppun to Dr. Sensenich, President of the A.M.A. giving his personal views on the $25.00 assessment levied by the national society was read by the secretary and discussed by the members. It was moved by Dr. Fleming, seconded by Dr. Toney, that a letter of commendation be sent to Dr. Reppun. Motion was discussed by the members and since Dr. Reppun's letter was written to Dr. Sensenich and merely an information copy was sent to our society the motion failed to pass by a vote of 17 to 2.

The Nominating Committee submitted the following names:

President.....DR. E. B. UNDERWOOD
Vice-President.....DR. E. T. SHIMOKAWA
Secretary-Treasurer.....DR. R. F. COLE

Dr. W. Toney was nominated for Vice-President from the floor. It was moved by Dr. Sanders, seconded by Dr. Toney that the secretary be instructed to cast a unanimous ballot for the names submitted by the Nominating Committee. Passed unanimously.

Drs. Burden and Tompkins were elected Delegates to the Territorial meeting.

Dr. Ferkany gave a very interesting paper supplemented by X-rays on the value of bronchoscopy in the diagnosis and treatment of various diseases and tumors of the chest. The discussion of the paper was led by Dr. Tompkins.

E. B. UNDERWOOD, M.D.
Secretary

A dinner meeting of the Maui County Medical Society was held at the Maui Grand Hotel at 6:30 p.m. on April 12, 1949.

It was voted unanimously that meetings hereafter be held on the third Tuesday rather than the second Tuesday of the month.

Dr. Ohata was elected a member of the Maui County Medical Society by transfer from Illinois Medical Association.

Dr. Underwood appointed the following committees:

Medical Disaster Committee
DR. MCARTHUR (CHAIRMAN); ST. SURE; TOMPKINS; BURDEN; TONEY AND ALLEN.
Medical Economics and Public Relations Council
DR. ST. SURE (CHAIRMAN); SANDERS; K. IZUMI; COLE; E. KUSHI AND ROCKETT.
Program Committee
DR. PATTERSON (CHAIRMAN); KASHIWA AND H. KUSHI.

(Continued on Page 364)

Medical News

The many serious disadvantages of dicumarol have led some workers to believe that heparin in a menstruum which delays absorption will prove to be a more practical anticoagulant (Artz, *et. al., Am. J. Surg.* 77:47 [Jan.] 1949). **Heparin in gelatin,** which gives an anticoagulant effect for twenty-four hours with a single intramuscular injection, is now available (Depo-heparin, Upjohn). It has been found that caronamide sensitizes to the action of heparin (McCleery, *et al.; Surgery* 24:348 [Aug.] 1948). Caronamide does not block renal excretion of heparin as it does with penicillin, but increases the anticoagulant effect of each dose of heparin, permitting the use of smaller doses of this still very expensive drug. Instantaneous anticoagulant effect is obtained by injecting 3 grams of caronamide and 50 mgm. of heparin intravenously. The therapeutic level is a coagulation time of thirty to forty minutes. As the effect of the initial intravenous injection wears off, as shown by venous clotting times done every four hours, additional injections of heparin in gelatin, in doses of about 200 mgm. of heparin, are given intramuscularly at about twenty-four hour intervals.

* * *

Oral vitamin K is advised for all patients who are given sulfathalidine or other unabsorbable sulfas in preparation for colon surgery. The coliform bacteria manufacture most of the body's vitamin K, and a deficiency of this vitamin develops when the gut is sterilized. The hypoprothrombinemia which results is directly proportional in severity to the bacteriostatic efficacy of the sulfa which is used. Wright and others (*Surg., Gynec. & Obst.* 88:201 [Feb.] 1949) found a significant increase in clotting and bleeding times in 71 patients given sulfathalidine. Other authors have reported alarming bleeding from rectal carcinomas following preoperative use of unabsorbable sulfonamides.

Parpanit, a synthetic antispasmodic related to trasentin, relieves the rigidity of Parkinsonism. Like **Tolserol** (Myanesin) another recent importation from Europe, it has little effect on Parkinsonian tremor. (Schwab, R. S., and Leigh, *J.A.M.A.* 139:629 [Mar. 5] 1949.)

* * *

Overdosage with dicumarol, inevitable wherever this whimsical drug is used in effective doses, is occurring more and more frequently as dicumarol comes into wider use. The antidote, vitamin K, is often agonizingly slow in action, even in the currently popular massive doses. **Vitamins P and C** apparently have a synergistic action in neutralizing dicumarol's hypoprothrombinemic effects (Marken, E. J., and Swayne, B., *Science* 109:201 [Feb. 25] 1949). Ascorbic acid and rutin would appear to be rational adjuvants to therapy with vitamin K when the situation is not grave enough to demand blood transfusion in cases of overdosage with dicumarol.

* * *

Isuprel (already marketed as Aleudrine in England) is an isomer of epinephrine with advantages that make it a useful addition to the family of drugs used in treating bronchial asthma. It can be given hypodermically in a concentration of 1:5000 instead of the 1:1000 dilution customarily used with epinephrine, but its unique usefulness lies in the fact that it works when given sublingually. It relieves mild and moderately severe attacks when given in this way. A 10 milligram tablet is given sublingually every thirty minutes until relief is obtained. This would seem to be much more convenient than inhalation or injection of epinephrine, especially for chronic asthmatics who need frequent medication. Isuprel is not effective in very severe attacks of asthma. (Lowell, Curley & Schiller, *New Eng. J. Med.* 240:45 [Jan. 13] 1949.)

C. A. Domzalski, Jr., M.D.

COUNTY SOCIETY REPORTS

(Continued from Page 363)

First Aid for County Fair
Dr. Wong.
First Aid for Fourth of July
Dr. Jim.
Publicity
Dr. Cole.
Consultants to Cancer Committee
Dr. Haywood (Chairman); Tofukuji and Ferkany.
Blood Bank
Dr. Rockett (Chairman); Kashiwa; Wong; Jim and Haywood.
Legislature Committee
Dr. Sanders (Chairman); Shimokawa and Cole.
Grievance Committee
Dr. Izumi (Chairman); St. Sure and Toney.
Annual Picnic
Dr. Sanders and Dr. Burden.
Advisors to Auxiliary
Dr. Sanders and Dr. Burden.

It was voted that Dr. McArthur be designated as Counselor.

It was moved by Dr. Toney and seconded by Dr. Fleming that the Maui County Medical Society adopt a resolution petitioning the H.M.S.A. to change their By-Laws to allow a member of the Maui County Medical Society to be a Member of the Board of Directors of the H.M.S.A. Passed unanimously.

Dr. Palma, President of the Territorial Medical Association, addressed the Society and discussed Public Relations, Fee Schedules and the H.M.S.A.

Robert F. Cole, M.D.
Secretary

THE HONOLULU COUNTY MEDICAL LIBRARY

MRS. ETHEL HILL, *Librarian*

MISS KATHERINE NEWHALL, *Assistant Librarian*
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Closed Saturdays at noon and Sundays
Closed all day and evening on National holidays
and at noon on Territorial holidays.

RECENT ACQUISITIONS

Anatomy & Physiology

De Robertis, E. D. P. *General cytology.* c1948. (gift of publisher)
Farris, E. J. *Anatomy and physiology laboratory guide.* 5th ed. c1949. (from Nurses' Association)
Stackpole, C. E. *Laboratory manual in anatomy and physiology.* 2nd ed. c1948. (from Nurses Association)

Cancer

Donner Foundation. *Index to the literature of experimental cancer research 1900–1935.* c1948. (gift of Donner Foundation)
Pack, G. T., ed. *Cancer of the esophagus and gastric cardia.* c1949. (gift of publisher)

Cardiology & Hematology

Lewis, Sir Thomas. *Electrocardiography and clinical disorders of the heart beat.* c1949.
Sturgis, C. C. *Hematology.* c1948. (gift of publisher)
U. S. War Dept. *Notes on cardiology in aviation medicine.* 1940. (gift of Dr. Rodney T. West)

Dermatology

Becker, S. W. *Modern dermatology and syphilology.* 2nd ed. c1947. (gift of publisher)
Goodman, Herman. *Cosmetic dermatology.* c1936.
Ormsby, O. S. *Diseases of the skin.* 7th ed. rev. c1948.
Sutton, R. L. *Handbook of diseases of the skin.* c1949. (gift of publisher)

Infectious Diseases

Dubos, R. J., ed. *Bacterial and mycotic infections of man.* c1948. (gift of National Foundation of Infantile Paralysis)
Rivers, T. M., ed. *Viral and rickettsial infections of man.* c1948. (gift of National Foundation of Infantile Paralysis)

Laboratory technique

Hepler, O. E. *Manual of clinical laboratory methods.* 4th ed. c1949. (gift of publisher)

Leprosy

Damon, E. M. *Siloama.* c1948. (gift of Dr. Norman Sloan)
Keffer, Luiza. *Indice bibliografico de lepra,* 1900-1943. c1948.
Muir, Ernest. *Manual of leprosy.* 1948.

Neurology & Psychiatry

Anderson, C. M. *Emotional hygiene.* 4th ed. rev. c1948. (from Nurses' Association)
Association for Research in Nervous and Mental Disease. *The frontal lobes.* v. 27. c1948.
Dunbar, Flanders. *Synopsis of psychosomatic diagnosis and treatment.* 4th ed. rev. c1948.
Egel, P. F. *Technique of treatment for the cerebral palsy child.* c1948. (gift of publisher)
Freud, Sigmund. *The interpretation of dreams.* 3rd ed. rev. 1931.
Henderson, D. K. *Psychopathic states.* c1939. (from Bureau of Mental Hygiene)
Hunt, J. McV., ed. *Personality and the behavior disorders.* 2 v. c1944.
Livingston, W. K. *Pain mechanisms.* c1943.
Lyons, W. R. *Atlas of peripheral nerve injuries.* c1949. (gift of publisher)
Plant, J. S. *Personality and the cultural pattern.* c1937. (from Bureau of Mental Hygiene)
Sadler, W. S. *Adolescence problems.* c1948. (gift of publisher)
Shadel Sanitarium. *Alcoholism—Collected papers.* v. 1. 1948. (gift of Shadel Sanitarium)
Thorner, M. W. *Psychiatry in general practice.* c1948. (gift of publisher)

Nursing

Committee on the grading of nursing schools. *Nursing schools.* c1934. (from Nurses' Association)
Committee to study administration in schools of nursing. *Fundamentals of administration for schools of nursing.* c1940. (from Nurses' Association)
Falls, F. H. *Obstetric nursing.* c1946. (gift of Library of Hawaii)
Goostray, Stella. *A textbook of chemistry.* 5th ed. c1940. (from Nurses' Association)
Jamison, Sara. *Solutions and dosage.* c1947. (from Nurses' Association)
National League of Nursing Education. *A study of pediatric nursing.* c1947. (from Nurses' Association)
National League of Nursing Education. *The contribution of physical therapy to nursing education.* c1948. (from Nurses' Association)
National League of Nursing Education. *Guidance programs for schools of nursing.* c1946. (from Nurses' Association)
Render, H. W. *Nurse-patient relationships in psychiatry.* c1947.
Shepard, Katharine. *Textbook of attendant nursing.* 3rd ed. c1942. (from Nurses' Association)

Ophthalmology

Spaeth, E. B. *Principles and practice of ophthalmic surgery.* 4th ed. rev. c1948.
Wiener, Meyer, ed. *Ophthalmology in the war years.* 2v. c1946-48.

Orthopedics

Bick, E. M. *Source book of orthopaedics.* 3rd ed. c1948.
Coley, B. L. *Neoplasms of bone.* c1949.
Shands, A. R. *Handbook of orthopaedic surgery.* 3rd ed. c1948. (gift of publisher)

Pediatrics

Ebert, Elizabeth. *The Brush Foundation study of child growth and development.* 1. Psychometric tests. 1943. (gift of Dr. Rodney T. West)

Greulich, W. W. *Somatic and endocrine studies of puberal and adolescent boys.* 1942. (gift of Dr. Rodney T. West)

Koshuk, R. P. *Social influences affecting the behavior of young children.* 1941. (gift of Dr. Rodney T. West)

Lerner, Eugene, ed. *Methods for the study of personality in young children.* 1941. (gift of Dr. Rodney T. West)

Roberts, K. E. *Persistence and change in personality patterns.* 1943. (gift of Dr. Rodney T. West)

Surgery

Bonney, Victor. *A textbook of gynaecological surgery.* 5th ed. 1948.

Meleney, F. L. *Clinical aspects and treatment of surgical infections.* c1949. (gift of publisher)

Therapeutics

Burn, J. H. *The background of therapeutics.* 1947.

Licht, Sidney, ed. *Occupational therapy source book.* c1948. (gift of publisher)

Miscellaneous

Anderson, W. A. D., ed. *Pathology.* c1948. (gift of publisher)

Bachmeyer, A. C., ed. *Hospital trends and developments.* (1940-1946) (from Hospital Association)

Clowes, William. *Profitable and necessarie booke of observations.* 1945. (gift of Chauncey Leake)

DeGowin, E. L. *Blood transfusion.* c1949. (gift of publisher)

Dubois, Albert. *Diseases of the warm climates.* c1948.

Fones, A. C., ed. *Mouth hygiene.* 4th ed. rev. c1934. (gift of Miss McGuiness)

Hawaii (Terr.) Laws, statutes, etc. *Session laws of Hawaii, 1947.* 1947.

Herrmann, G. R. *Clinical case-taking.* 4th ed. c1949. (gift of publisher)

Kleiner, I. S. *Human biochemistry.* 3rd ed. c1948. (gift of publisher)

Mitscherlich, Alexander. *Doctors of infamy.* c1949. (gift of publisher)

Ruff, Siegfried. *Compendium of aviation medicine.* 1942. (gift of Dr. Rodney T. West)

Thomson, Sir St. Clair. *Diseases of the nose and throat.* 5th ed. n.d. (gift of publisher)

Titus, Paul, ed. *Directory of medical specialists.* v.4. c1949.

U. S. War Dept. Surgeon General. *Index catalogue of the Library of the Surgeon-General's Office.* U. S. Army. 4th series. v.10. 1948. (gift of Col. Jones)

Veterans Administration. *Technical Bulletins,* Series 10. v.2. 1948. (gift of Veterans Administration)

Wilson, C. C., ed. *Health education.* 4th ed. (gift of publisher)

Wiprud, Theodore. *The business side of medical practice.* 2nd ed. c1949. (gift of publisher)

* * *

It may be interesting to note that the volumes in the library now total over 11,000. 279 members of the Medical Society are registered borrowers and 496 nurses (including student nurses). Daily attendance figures show that visits of the doctors to the library increased 1500 over last year, and nurses proportionately. Over 7500 books and journals were borrowed in 1948 and over 13,000 used in the library. These figures show an amazing increase in demand for library services and prove that the doctors and nurses are becoming more conscious of the growing resources of the collection.

BOOK REVIEWS

Doctors of Infamy, **The Story of the Nazi Medical Crimes, by Alexander Mitscherlich, M.D., 172 pages, 16 photographs, price $3.00.**

Even in an age of horror, this book was a depressing shock. "Truth is more amazing than fiction" could well be paraphrased here as "the truth is more horrifying than the bloodiest murder mystery" and more unbelievable. The actors were high-ranking men of science, a professor of anatomy in a famous medical school, a top surgeon in a large Berlin hospital, and many doctors who had received the most intensive education and had had long experience with thousands of patients.

As the pages turn you see them sitting calmly taking the pulse of two Russian officers, forced nude into an ice vat. They watch the Russians hour after hour as life is slowly snuffed out. You read of them amputating the leg of a healthy Ukrainian girl to see if it could be transplanted, and of another whose shoulder girdle was removed. You read of a beautiful twenty-one-year-old college student dying in dreadful agony after being injected with gas bacilli. But these samples represent only a few of the thousands who died agonizing, macabre deaths in the name of medical experiment.

You read of the killing by injections of many half-Jewish children, twenty of them girls, and the killing of 35,000 Poles because they had tuberculosis; the sterilizing of young Jewish women by the injection of irritating fluids into their uteri; and the castration, by x-ray and surgery, of men who were then forced to continue working. Those who dropped were gassed. You read of children being given intravenous injections of tubercle bacilli and dying weeks later of miliary tuberculosis; young women being injected with pus, and men with blood, from typhus patients; injection of unwanted ones with gasoline and phenol; of doctors being ordered by "high authority" to certify deaths of murdered people as deaths from natural causes. You read of a professor of anatomy wanting a collection of skulls of one hundred and fifty young Jewish-Bolshevik men and women, and writing out careful instructions as to how he wanted the heads severed and preserved. The gruesome story of how these were killed in groups of fifteen and twenty by young S.S. men who stripped the women and pushed them into a lighted gas chamber is a story of hell that even Dante could not imagine. But why go on, except to add perhaps a note on perverted sex touches; such as a man iced to unconsciousness, then squeezed between two nude female prisoners to see if he would warm up as rapidly with them as with hot water. When some became conscious they were then forced to coitus to note its effect. One horror page follows another.

What is the significance? Albert Deutsch wrote: "They produced not a single new cure, nor did a single important discovery result from the experiments performed on their human guinea pigs." It may signify that we have put too much value on "book" intelligence and the I.Q. It may indicate how debased the highest mental acumen can be when not balanced by emotional and spiritual values. The book may be the strongest indictment yet against "state medicine." The doctors were employed by the state and had to obey orders. It emphasized the danger of dictatorship, and how quickly benevolent paternalism (if the former is absolute) can deteriorate into fanatic oppression. The human brain has not yet evolved to a point where anyone or group can be trusted with power over life or his fellow man.

It certainly exposed the myth of the German superman and the weaknesses in his "scientific thoroughness." It fits in well as an end result of the unscientific and false dogma of Freud and his ridicule of all higher and decent emotions. It did suggest the danger of "an organizational stage of civilization in which the individual no longer makes the ultimate ethical or moral decisions, nor answers for them." And it warns us that, "freedom frivolously surrendered comes home to roost in the shape of tyranny. Whoever squanders his liberty earns only contempt." Perhaps we shouldn't omit the fact that these horrors performed by doctors — seven of whom were hanged — changed for the first time in two thousand years, the Hippocratic oath. It now includes, "I will not permit consideration of race, religion, nationality, party politics or social standing to intervene between my duty and my patient. . . . Even under threat I will not use my knowledge contrary to the laws of humanity."

After this book, all doctors must hang their heads in shame, talk less pompously, work harder and in service to their communities help wipe off this blot on the escutcheon of medicine. That, at least, is one evaluation.

NILS P. LARSEN, M.D.

Diseases of the Nose and Throat, **a Textbook for Students and Practitioners. By Sir St. Clair Thomson, M.D., and V. E. Negus. Fifth Edition. 13 Colour, 20 Radiographic and 11 other Plates and 369 figures. 1004 pages. Price $16.00.**

This 1000-page textbook for students and practitioners is the culmination of 38 years of steering by the same "skipper," Sir St. Clair Thomson. He leaves nothing to doubt; even references are seldom over 10 years old; none over 20.

Throughout, the author assumes a mutuality of interest in, and the intelligent application of, the latest concepts, stressing principles of defense against infection, especially by chemotherapy and antibiotics.

Chapters on allergy and cancer of the larynx are elaborated upon, while less attention is given to atrophic rhinitis and syphilis.

I felt that the text was a bit too all-inclusive. For instance, he might well have left out Chapter LXIII, "The General Treatment of Syphilis." But the book merits the wide acceptance given it.

CLARENCE W. TREXLER, M.D.

Handbook of Diseases of the Skin, **by Dr. Richard L. Sutton and Dr. Richard L. Sutton, Jr., 1057 illustrations, 749 pages. Price $12.50.**

This attractive book is another of the Sutton series on skin. It represents an effort to present the field of dermatology succinctly for the student, in easy reference form for the general practitioner, and in sufficient detail to please the dermatologist. It can be recommended for all of these readers.

The student will find useful the illustrations in the section on anatomy. The book will be of aid to the practitioner in that it is profusely illustrated, modern, and has well organized instructions for the management of several common skin conditions. The figure suggesting causes of contact dermatitis should be helpful. The specialist is offered an up-to-date bibliography which will aid him in his study of the literature.

While the book is a valuable contribution to the field certain sections could have been organized for greater clarity and written in a less cumbersome style. For example, in the discussion of syphilis, while new techniques are presented, many of the old ones are retained. This may be a source of confusion to medical students. Readers in Hawaii will wish that in the section on leprosy the authors had used newer terminology, and that their statement on lepromin had been different.

SAMUEL D. ALLISON, M.D.

The Business Side of Medical Practice **(2nd Edition), by Theodore Wiprud, Executive Director and Secretary of the Medical Society of The District of Columbia and Managing Editor of the Medical Annals of the District of Columbia. 232 pages, 22 figures. Price $3.50.**

This book covers everything from personal efficiency and office management to investments and public speaking, which is quite an assignment for only 232 pages. A better title for the book would have been "A Business Primer for New Doctors," for its main appeal is to the new doctor just starting his practice. Even then, some of the subjects are covered so sketchily one wonders why they were included at all.

The first edition came out around ten years ago and had a fair sale, probably because there is such a dearth of books on the subject. This second edition has been brought up to date, but it still does not live up to its title. To the new doctor just starting out it is worth reading, but the older doctor can get more by sticking to his "Medical Economics."

JOHN R. SEDGWICK

The Medical Clinics of North America. **Chicago Number. 292 pp. Price $18.00 per year. W. B. Saunders Company, Philadelphia and London, January, 1949.**

Nineteen articles by sixteen Chicago dermatologists and their associates, plus (by invitation) Drs. Paul O'Leary of the Mayo Clinic and Arthur Curtis (and Robert Grekin) of the University of Michigan, comprise this interesting and stimulating dermatologic issue of the Medical Clinics of North America. Some of the articles are definitive and authoritative monographs: e.g., Dermatomyositis by O'Leary; Sarcoidosis by Curtis and Grekin; Dermatitis exfoliativa, by Senear; Cutaneous allergic disorders, by Rostenberg; Pemphigus, by Rattner. Others are practical, didactic articles for the practitioner: e.g., Management of atopic dermatitis, by Hetreed; Management of nevi, by Webster. James Mitchell discusses the recently observed "base coat" dermatitis of the nail beds, with excellent photographs; Scull describes cutaneous tuberculosis in the Negro; Finnerud discusses Bowen's disease; Ebert makes all clear about the two herpes', simplex and zoster; Edward Oliver and Fay Squire discuss skin cancer and its treatment; Graffin *et al.* present a study of disseminated lupus erythematosus; and Becker discusses neurodermatitis and pruritus.

There is much of value in this issue of the Clinics for both the specialist and the general practitioner.

HARRY L. ARNOLD, JR., M.D.

Clinical Aspects and Treatment of Surgical Infections, **by Frank Lamont Meleney, M.D., F.A.C.S., with a Foreword by Allen O. Whipple, M.D., 840 pages, 287 figures. (1949) Price $12.00.**

This volume by Dr. Meleney is essentially a record of his life's work in the field of surgical infections. During these years he has directed a bacteriological laboratory devoted to the study of the organisms found in both surgical and traumatic wounds. New and previously undescribed types of organisms have been isolated, their laboratory characteristics identified, the clinical features distinguishing the type of infection produced by them studied and, most important of all, appropriate therapeutic measures tested and proved to be efficacious. For example, the chronic, burrowing, undermining ulcer produced by the microaerophilic streptococcus was identified as a specific entity and the well-known zinc peroxide therapy developed.

The essence of the book is presented in the first chapter, entitled Physiological Considerations in Surgical Infections. In it the principles of physiological antisepsis are enumerated, the physiological concepts of chemotherapy explained, and the physiological principles of surgical technic developed. This concise discussion of the importance of preventing and treating surgical infection from a physiological point of view is invaluable.

From this introduction, surgical infections as they are found in each system of the body are described. The clinical picture and the bacteriology of the different types are given and the various therapeutic measures discussed completely. Definite recommendations as to the procedures of choice are given without getting bogged down in controversial matter or technical detail. There is no tendency to present merely a rehash of past teachings; instead, for each type of infection specific measures are proposed, highly documented by illustrative, detailed case records from the files of the author and his associates. Finally, many good illustrations help to clear up the descriptive gaps where the word picture fails.

Certainly this monograph can be highly recommended as a complete reference work for every physician who has to deal with surgical infections.

G. C. FREEMAN, M.D.

Atlas of Peripheral Nerve Injuries, **by William R. Lyons, Ph.D., and Barnes Woodhall, M.D., 339 pages. Price $16.00.**

The recent war furnished a unique opportunity for the study of large numbers of traumatic wounds. Dedicated to the men who sustained these wounds, this book makes the most of this opportunity and is a classic work on the subject of the histologic and pathologic response of peripheral nerves to trauma. The lack of any similar work on the subject makes the book even more valuable and timely.

During the years 1943, 1944, and 1945, first at Walter Reed General Hospital and then at Halloran General Hospital literally hundreds of specimens of nerves, representing the mirror images of the ends of nerves actually sutured, were collected, described and photographed. Sutures done early in this period could be evaluated later by referring to the specimens of the approximated ends. From this mass of material the authors over the past three years have constructed a book of beautiful photomicrographs, carefully arranged and concisely and fully explained. Pathologic evidence is presented clearly of the changes which take place in nerves from all types of injuries and the speed with which they take place, so that an intelligent method of handling patients is defined. The causes of failure in nerve sutures are distinctly shown.

But this is more than an atlas. Numerous case histories are presented along with the photomicrographs representing the course of treatment which may in some patients have spread over years. Actually, through the Peripheral Nerve Suture Registry, it is hoped a follow up can be maintained indefinitely. The literature pertinent to subjects under study in various sections is reviewed and summarized. The problems of "Stretch palsy" and nerve graphs are covered in detail with pathologic specimens to elucidate the problems involved. This beautiful piece of work is sure to have a lasting appeal to students, teachers, surgeons and pathologists alike.

JOHN J. LOWREY, M.D.

Blood Transfusion, by Elmer L. DeGowin, M.D., 587 pages, 200 diagrammatic drawings. (1949) Price $9.00.

The authors of this book are all three internists who have supervised transfusion services, and have, of course, had many patients who received infusions of blood and blood derivatives. They have seen this procedure develop from a small beginning to a medical specialty.

Heretofore the great majority of knowledge concerning blood transfusion has had to be gleaned from the literature, since no one book contained all the information necessary for the physician interested in this subject. This volume meets this need, and presents in a clear, concise manner the basic knowledge of importance to all physicians, and technicians associated in any way with the transfusion of blood and blood derivatives.

This book is recommended for reading and study by all physicians who use blood as a therapeutic agent.

LEON E. MERMOD, M.D.

Modern Dermatology and Syphilology, by S. William Becker, M.D., and Maximillian Obermayer, M.D. Second Edition. 1017 pp. with 461 figures and 37 color plates. Price $18.00. J. B. Lippincott Company, Philadelphia, London and Montreal, 1947.

The enlarged and revised second edition of this excellent teaching textbook of dermatology is distinguished by the outstanding quality of three sections in particular: those on leprosy, on tropical dermatoses, and on the neurodermatoses. Leprosy, though the authors call it by the Greek word for "scaly disease," i.e., *lepra*, is correctly described in accordance with Hansen's dual biologic classification instead of, as in most dermatologic texts, Danielssen's three-way anatomic one. The tropical dermatoses section is enriched by both text material and illustrations obtained from a variety of South and Central American sources by the junior author. The section on neurodermatoses and their management is unexcelled for clarity and practical value in any textbook with which I am familiar.

The 32 pages of index and the detailed summary at the head of each chapter make the book easy to use, especially for the student. The illustrations are numerous and excellent, and charts have been employed in several places to summarize and clarify the text. Good bibliographies follow each chapter, divided according to subject. References are as recent as 1945 (publication was in 1947). The text is still one of the best for students, and is becoming a strong contender for use by practitioners as well.

HARRY L. ARNOLD, JR., M.D.

Essentials of Gynecologic Endocrinology. By Gardner M. Riley, Ph.D., 1948, 205 pages, price $3.00.

This is an excellent compact manual with much practical and valuable information for the busy practitioner, especially the obstetrician and gynecologist. Written in a brief and clear manner, the author presents only the more accepted theories and methods of therapy.

The book is divided into three sections: endocrine physiology; clinical; diagnostic procedures, sex hormone chemistry, and endocrine preparations. The presentation is up-to-date and includes estrogen therapy in abortion, estrogen and progesterone therapy in menstrual dysfunctions, pregnandiol test (Guterman) for pregnancy, etc. There is a chapter dealing with commercial endocrine products which summarizes the forms of various preparations, their source and relative potency.

Definitely a good book in the office.

K. S. TOM, M.D.

Physicians' Desk Reference to Pharmaceutical Specialties and Biologicals. In Four Sections. Medical Economics, Inc., Rutherford, New Jersey, 1949.

The druggist has for a long time felt the need for such a book, and has had one. The tremendous increase in the number of drugs whose chemical names occupy several lines on a label, and whose common names differ according to the manufacturer who makes them, has created an urgent need for such a volume as this. If, for example, you have read an article which tells about a useful mercurial diuretic, but you have forgotten the name, you may look under "mercurial diuretics" in this book and find a list of all of the mercurial diuretics, and most of the available information concerning them. If you know the chemical name and you don't know what it is for, you may look up the chemical name in this book and obtain all the information available concerning it. It is astonishingly up to date, and the pharmacological and therapeutic information contained in it, from a relatively superficial examination of the volume, appears to be excellent. It seems to be a very useful book for any physician to own.

H. L. ARNOLD, SR., M.D.

Practical Aspects of Thyroid Disease, by George Crile, Jr., M.D., F.A.C.S., 355 pages, 101 figures. (1949) Price $6.00.

This book represents an important contribution to the clinical literature of a category of diseases, doubly important because of the increasing incidence of those diseases and because of rapid progress in therapeutic methods of relieving thyroid disorders.

In simple and logical phrases, Dr. Crile presents the recent advances in the concept of thyroid physiology and the progress in medical and surgical management resulting from the better understanding of the normal and pathologic physiology of this gland.

The subject matter is presented through an orderly outline and in a manner that makes reading easy and rapid. The clinician who has occasional or frequent contact with patients suffering from disorders of the thyroid will find this book an invaluable reference.

JAMES W. CHERRY, M.D.

Clinical Case Taking, Guides for the Study of Patients, by George R. Herrmann, M.D., Ph.D., 4th Edition, 1949, 240 pages. Price $3.50.

This book contains a detailed outline for a general workup of the patient plus approaches for special examinations of the various systems, pediatrics, surgical and mental cases. It can be highly recommended for the third year student commencing his clinical medicine. To the more advanced student, to the general practitioner, and to the specialist confronted with a problem outside his field, it offers a handy reference.

RAYMOND M. DEHAY, M.D.

PSYCHIATRIC COMMENT

THE MENTAL HYGIENE SOCIETY OF THE TERRITORY OF HAWAII

The Mental Hygiene Society of the Territory of Hawaii had its beginning in the pioneer work of Miss Margaret M. L. Catton. Through her efforts a psychiatric social worker was brought to the Territory in the fall of 1935 to work at the Queen's Hospital. This worker, Miss Florence Brugger, did education in the field of mental hygiene along with her job of hospital social work. In 1937 the University of Hawaii brought Dr. Franklin G. Ebaugh, professor of psychiatry at the University of Colorado Medical School, to the Islands for a series of lectures on mental hygiene at summer school. Miss Catton and Miss Brugger enlisted the help of Dr. Robert Faus to look into the possibilities of securing Dr. Ebaugh's services to make a mental hygiene survey of the Territory. Through Dr. Faus' efforts the Public Health Committee of the Honolulu Chamber of Commerce agreed to pay the costs of such a survey. A joint committee of the Chamber of Commerce and the Psychiatric Committee of the Hawaii Territorial Medical Association was formed with representatives of other private and public organizations. This committee was to plan and work with Dr. Ebaugh. Miss Brugger was loaned by Queen's Hospital to the project and worked with Dr. Ebaugh during the entire period of the study.

At the end of his survey Dr. Ebaugh made the following recommendations:

1. Recodification of existing laws regarding the treatment of mental patients.
2. Reorganization of administration and treatment of mental patients.
3. The creation of a territorial psychiatric clinic.
4. The development of psychiatric departments and facilities in general hospitals in the community.
5. Community education.
6. Organization of a mental hygiene society.

In the summer of 1938 the Chamber of Commerce recalled Dr. Ebaugh to effect his third recommendation, the organization of a psychiatric clinic. This project was to be financed through the Chamber of Commerce until such time as it could be placed under Territorial jurisdiction. In the 1939 legislature a bill was passed creating the Bureau of Mental Hygiene within the department of health.

During this entire period, the Psychiatric Committee of the Hawaii Territorial Medical Association in cooperation with the Honolulu Council of Social Agencies had been formulating plans for the organization of a territorial society for mental hygiene. The war disrupted these plans for a time but in August 1942 the Society finally took form. In 1946 a full-time executive secretary was employed to work with the Board of Directors and the standing committees set up by the constitution: Education, Legislation, Research and Rehabilitation.

The purpose of the Society is primarily education. This is accomplished by lectures, radio programs, movies and the distribution of pamphlet material. The organization does not offer treatment service, but provides information about proper private and public facilities. It acts as a clearing house and coordinator for mental hygiene activities of other community agencies and civic groups.

The society's expanding program of education and coordination is designed to understand and meet the mental health needs of men and women in all age groups, with particular emphasis on the mental health needs of the normal individual. One of the major projects of the Society is to encourage people who need psychiatric attention to get it early, in order to prevent a severe illness. An increasing number of patients are going voluntarily to psychiatrists and psychiatric hospitals. This shows the result of an educational program emphasizing the importance of early recognition and prevention. The Society endeavors to bring an appreciation of good mental health in the lives of children through contacts with parents, teachers, and young high-school and college students.

The Mental Hygiene Society is a democratic, social and educational force in the community which seeks to insure every person an opportunity to develop adequately his capacities as an individual.

MARGARET HACKFIELD
Executive Director

NOTES AND NEWS

PERSONALS

DR. STANLEY M. SAIKI, a native of Kapaa, Kauai, has opened his offices in Kaimuki, Honolulu, in association with DR. ISAMI TASHIMA, for the general practice of medicine and surgery. Dr. Saiki, who is a graduate of the University of Hawaii, received his M.D. from Temple University, Philadelphia, in 1945 and interned at the St. Joseph Hospital, Philadelphia. Following this he served as surgical resident at this hospital for fifteen months and then for five months at the St. Francis Hospital, Honolulu.

The St. Francis Hospital has added DR. WILLIAM A. CONOVER, of Los Angeles, California, to the residency staff. Dr. Conover is a graduate of the St. Louis University School of Medicine in 1946 and interned at the Oakland Naval Hospital. After this he spent two years in the Marshall Islands in the Navy.

The Children's Hospital has secured the services of DR. WILLIAM STENGEL, of Pittsburgh, as a resident in pediatrics. He is a graduate of the University of Pittsburgh and interned at the Mercy Hospital in Pittsburgh. He served in the Pacific in the Navy during 1946 to 1948.

The Kapiolani Hospital has a new resident in obstetrics and gynecology in the person of DR. OLAS H. CHRISTOFFERSON, of Seattle, Washington. He received his M.D. in 1946 from the George Washington University and interned at the Swedish Hospital, Seattle, where he also had a residency in obstetrics.

Recent arrivals to the medical profession in Honolulu include a son, Daniel, born to DR. AND MRS. FRANK GAUDIN on March 6 at The Queen's Hospital; a son, Robert Edgar Kulani, born to DR. AND MRS. EDGAR S. CHILDS, on March 6, at The Queen's Hospital; a daughter, Dawn Louise, born to DR. AND MRS. KEITH KUHLMAN, on April 17, at the St. Francis Hospital; and a daughter, their third child, Patricia Leilani, born to DR. AND MRS. RICHARD HORIO on April 25, at The Queen's Hospital.

On Maui, a daughter, Margaret Lawlor, was born to DR. AND MRS. JOHN SANDERS on April 23 at Paia Hospital.

DR. ROGERS L. HILL, of Honolulu, is taking a four months' mainland trip, during which time he took the second part of the American Board of Surgery examinations in San Francisco. He is visiting various medical centers in addition to his first trip since 1936 to his former home in Alabama.

DR. CHING TUNG LIU, of Honolulu, has been appointed chief of the neurosurgical service at the Veterans' Hospital in Canandaigua, New York.

DR. PHILLIP S. ARTHUR, of Honolulu, has returned from a mainland trip, during which he attended the American Medical Association meeting and visited several radiological centers.

DR. JOSEPH E. STRODE, of the Clinic, has returned from a meeting of the American Surgical Association in St. Louis and from visits to various surgical clinics in New York and elsewhere.

DR. JOE LUCAS, of Wahiawa, has returned from post-graduate course in surgery at Denver, Colorado, under Dr. Kenneth Sawyer. He also studied for two months at the Mayo Clinic, Rochester, Minnesota.

DR. TED A. CASEY has returned to Honolulu after an absence of four and a half years and is specializing in orthopedic surgery, with offices in the Young Building. Dr. Casey is a graduate of the University of Colorado Medical School in 1939 and interned at The Queen's Hospital from 1940 to 1942. He served as plantation physician for several years prior to serving in the U. S. Navy in 1945-46. His graduate training in orthopedics was at the New York Orthopedic Hospital and while in the Navy at the St. Albans Hospital, Long Island.

DR. DOROTHY NATSUI has opened her offices for the practice of psychiatry at 1507 Kapiolani Blvd., Honolulu. She was previously at the Territorial Hospital, Kaneohe, for five years, as hospital physician. She was graduated from the Loyola University Medical School in Chicago and took post-graduate work in child psychiatry at the Johns Hopkins Hospital, Baltimore.

DR. J. ROBERT JACOBSON, formerly of Chicago, Illinois, has opened his offices in the Alexander Young Building, Honolulu, for the practice of neuropsychiatry. He was formerly Clinical Director at the Territorial Hospital, Kaneohe. He was graduated from the University of Illinois Medical School in 1926, and served on the staff of the Elgin State Hospital from 1930 to 1942. He became a diplomate of the American Board of Psychiatry in 1941. During the last war he served as a Lieutenant Commander in the Navy and was chief of neuropsychiatry at the Aiea Naval Hospital.

DR. CHARLES C. CUSTER has opened his offices in Kailua, Oahu, for the general practice of medicine and surgery. He recently completed a year as resident at the St. Francis Hospital, Honolulu. Dr. Custer was graduated from the University of Pittsburgh Medical School in 1943 and interned at the Hollywood Presbyterian Hospital, following which he took a residency in surgery and anesthesia at the same hospital. He was discharged from the Army as a Captain after serving for two years in the Pacific area.

DR. GARDNER BLACK has moved from Honolulu to Kamuela, Waimea, Hawaii, where he is physician to the Parker Ranch and is in private practice also. His many friends on Oahu wish him much happiness in his new location.

Attending the U. S. Army Medical Center course at Walter Reed Hospital, Washington, D. C. were DR. ROBERT FAUS, DR. ALVIN MAJOSKA AND DR. R. P. WIPPERMAN, of Hilo. This course, "The Radiological Effects of Atomic Bursts," was given primarily for National Guard Officers and civilian defense officials. Dr. Faus also attended the special meeting of the American Medical Association State Directors of Emergency Medical Service, in Chicago, as director of the Honolulu medical civilian defense unit. He was a guest at the American College of Physicians meeting in New York City.

DR. S. MIZUIRE of Hilo landed a 559 pound swordfish off the Kona coast in April.

ALFRED HERBERT WATERHOUSE, M.D.

1877-1948

Dr. Alfred Herbert Waterhouse died at a local hospital December 24, 1948 from Parkinson's disease after an illness of many months. Dr. Waterhouse was born on August 12, 1877 at Cedar Rapids, Iowa. He received his A.B. from Princeton and his M.D. from Rush Medical College. He came to Kauai after an internship at the Silver Cross Hospital.

Dr. Waterhouse began his medical practice at Koloa in October, 1907. He followed in the footsteps of his grandfather James W. Smith, and his uncle Jared K. Smith. James W. Smith came to the islands in 1842 and was the second physician to practice on Kauai. Jared Smith worked with his father until the latter's death in December, 1887. Jared was the doctor in Koloa then until his death in 1897.

When Dr. Waterhouse came to Koloa in 1907 as doctor for the Koloa Sugar Company, there was no hospital or trained nurse. The so-called hospital, consisting of two camp houses put together, was in charge of an untrained Japanese man who couldn't read English. It was located near the plantation office. There was also a small dispensary with a limited amount of drugs.

All transportation was by horse-back or carriage until May of 1909, when Dr. Waterhouse got his first automobile. This was a sporty, two-cylinder Maxwell, a bright red, two-passenger model with no top or windshield, and headlights lit by acetylene gas. Since few roads were macadamized at that time, the Maxwell often got stuck in the mud on the up-hill roads leading out of Koloa, and the doctor would have to walk home, saddle up his horse and start out again.

Despite hardships and exceedingly long hours Dr. Waterhouse had the foresight and initiative to inaugurate methods and practices which contributed to the advancement of medicine on Kauai. Thus a 21 bed hospital and 4 cottages in the yard, in which to care for tuberculous cases, were built in Koloa during the time that Charles Wilcox was manager. In 1926 Dr. Waterhouse added a physiotherapy department to the Koloa hospital at his own expense. He secured Koloa's first resident dentist when Dr. Justine Smith came to Kauai in April, 1921, and he started the first pathological laboratory on Kauai in May, 1928. Dr. A. M. Ecklund, of St. Louis, Missouri, was secured to take charge of it. In December of 1928 Dr. Waterhouse was appointed a member of the board of the Samuel Mahelona Memorial Hospital for tuberculosis and held that position until December, 1941. In 1925 he started a "Baby Clinic" and a little later a prenatal clinic for mothers. He was the first president of the Kauai Tuberculosis Association.

Outside of his medical practice, he had many other interests. In January, 1934, he was appointed to the Board of Education as Commissioner for Kauai, and continued in this position until he resigned in April, 1944. He was a member of Koloa Union Church, where he served on the Board of Deacons and also as a trustee. He enjoyed good music and was an amateur cellist. He taught a Sunday School class of eighth grade boys, and often took his class on hikes and trips.

In the days when roads were poor and cars were few, the doctor instituted an annual outing for the people of Koloa. Through the plantation manager he obtained the use of a locomotive, an engineer, and cane cars to take the people to Poipu on the Fourth of July. He was a member of the first board for Kukuiolona Park when Walter McBryde deeded the park to the County of Kauai. He was always interested in the Boy Scouts, and was on the Scout Board for several years. He also served for several years on the Hawaiian Board, as well as the Y.M.C.A. and Salvation Army boards.

Dr. Waterhouse is survived by his widow, Mrs. Mabel Palmer Waterhouse, three children, and eleven grandchildren.

WEBSTER BOYDEN, M.D.

DAVID LIU, M.D.

1901 - 1949

The many friends of Dr. David Liu, physician for the McBryde Sugar Company, Kauai, were grieved to learn of his sudden death from coronary thrombosis on February 9, 1949.

Dr. Liu was born in Honolulu on July 24, 1901. He received his medical education at the College of Medical Evangelists, Los Angeles, graduating in 1930. For some years following his graduation he was on the staff of the Emergency Hospital in Honolulu. Subsequently he spent a year on the staff of Kalaupapa Settlement on Molokai. Returning to Oahu, he saw a year's service as resident physician at the Territorial Hospital. In 1939 Dr. Liu took an extended course at the Graduate School of Medicine, University of Pennsylvania, majoring in internal medicine. In July, 1940, he became assistant medical director at Samuel Mahelona Memorial Hospital on Kauai, a position which he held until August, 1944, when he resigned to enter private practice at Kapaa, Kauai. After some months of successful practice at Kapaa, Dr. Liu was offered the position of plantation physician for the McBryde Sugar Company, Kauai. He held this latter position until the time of his death.

Professionally, Dr. Liu was a conscientious, hard-working physician. He owned an extensive library and subscribed to numerous journals. It was my pleasure to be associated with him during his last three years on the staff of Mahelona Hospital. Quiet and unassuming, he was a dependable physician and a loyal friend.

Dave—as he was affectionately called by his friends—was an individual, a man of varied in-

terests. He was an amateur magician of considerable skill. He was a good machinist and possessed a steam-fitter's license. He had an aviator's license and flew his own plane for several years before his death. He had studied calligraphy in his earlier days and could write in a beautiful hand. He was a successful amateur gardener, and nothing gave him more pleasure than to raise a prize crop of tomatoes or peanuts. He was also an ardent rod-and-line fisherman, an enthusiastic advocate of what Isaac Walton termed "the contemplative man's recreation."

Above all, Dave was a devoted family man and his memory will be forever revered by his surviving wife, Phoebe, and by his four children, all boys and all of pre-school or school age. I take this opportunity of paying Dave the tribute which he would value above all others: He was a very human, human being. Those of us who fished with him will miss him when we go fishing.

D. R. CHISHOLM, M.D.

SOCIETY OF NEUROLOGY AND PSYCHIATRY OF HONOLULU

The physicians of Oahu interested in psychiatry and neurology have gathered to form the new "Society of Neurology and Psychiatry of Honolulu." The formation of such a society has been under consideration for many years, and the first meeting was held October 20, 1948. Following three meetings of organization, a constitution and by-laws have been adopted. Temporarily elected officers of the society are: President: DR. RICHARD D. KEPNER; Secretary-Treasurer: DR. H. JOSEPH SIMON; Chairman of Committee of Constitution and By-laws: DR. THOMAS S. BENNETT; Chairman of the Program Committee: DR. H. JOSEPH SIMON. It has been arranged that programs relating to subjects of neurology and psychiatry and the application of these specialties to general practice in medicine be presented at the meetings. Other members of the medical profession are invited to attend the meetings, which are held every two months on the second Wednesday.

COURSE IN GASTROINTESTINAL SURGERY

The National Gastroenterological Association, in cooperation with the Postgraduate Division of Tufts College Medical School and the First and Second Surgical Services of the Boston City Hospital, announces a course in gastrointestinal surgery to be given at the Boston City Hospital, Boston, Mass. on October 27, 28, 29, 1949.

The course will cover various phases of gastrointestinal surgery. It will be under the personal direction of Dr. Owen H. Wangensteen, Professor of Surgery, University of Minnesota Medical School, assisted by Lord Alfred Webb-Johnson, President of the Royal College of Surgeons, London, England, and the members of the surgical staff of the Boston City Hospital, as well as other distinguished guests.

Enrollment in the course is limited to 250. The fee will be $35.00 per person. Veterans may take this course under the G. I. Bill of Rights.

For further information and enrollment write to the National Gastroenterological Association, Dept. GSJ, 1819 Broadway, New York 23, N. Y.

CORRESPONDENCE

March 21, 1949.

Dr. George F. Lull, Secretary and General Manager,
American Medical Association.

Dear Doctor Lull:

In response to your communication of March 15th addressed to Dr. Harry L. Arnold, Jr., Secretary, Hawaii Territorial Medical Association, which I have been asked to reply to—the Blood Bank of Hawaii is the only Blood Bank in the Territory, having started sometime before the war under my position as President and Director.

The Board of Trustees or Directors sets the policies of the bank and has over-all control of its policies.

At the present time the Blood Bank of Hawaii serves all the hospitals in the Territory in the sense that we are on call to serve them all at a moment's notice. Regularly it serves the patients in twenty-eight hospitals in the Territory, which number includes all the hospitals on this Island (Oahu) ten on the Island of Hawaii, the Kalaupapa Leper Settlement on Molokai and Kula Sanitarium on Maui.

From the bank in Honolulu the donor teams are sent out to various population centers on this Island as well as the other Islands to take donors. The team goes at regular intervals to some places and at irregular intervals to others. The bloods are brought by air to Honolulu for processing. Because of our splendid and frequent air service schedules we are able to transport blood to any outlying hospitals almost at once, and to take up the slack and to be ready for instant transfusion purposes, we maintain at each of twenty-eight hospitals selections of blood of the various types and in such numbers as to meet any emergency demand. These bloods are kept as "stock" in the laboratory ice boxes of these various hospitals, and no matter what time of day or night an emergency occurs each of these hospitals has instantly available a supply of blood of all types, both Rh-negative and Rh-positive, as well as Low-titered O so that there is no time lapse in the event that an emergency arises.

By wire, code or telephone, these outlying hospitals report their needs daily to the central bank in Honolulu and the blood is shipped out in special, tested containers, each container holding six doses of blood. The blood is packed with dry ice so that it reaches its destination in perfect condition and thus far, in our several years of operation, we have had no difficulty whatever with supplying all of the Territory's blood needs from one central station. (We have even shipped blood packed in dry ice to New York City and it has been used on patients without reaction.)

Our bank uses the standard sterile transfusovacs (put out by both Baxter and Cutter) containing "ACD" solution and our blood can therefore be used within thirty days, altho 80% of it is used within two weeks of being drawn. Any hospital having outdated blood on hand returns it to us for credit and such blood is processed into plasma. If any hospital fails to return blood when outdated, we make them financially responsible. Both our liquid and dried plasma is also kept in stock at all distribution centers and hospitals.

I have set forth this rather detailed explanation of our operations so that you may know that we have perfected an organization plan which has the full and enthusiastic cooperation from everyone concerned, and by the use of the insurance system and the replacement system, as well as the organization reserves, we are able to keep approximately 600 doses of blood on hand at all times. This number includes those at our central bank and at all the hospitals.

At the present time we are turning out approximately one thousand doses of blood per month and we are capable of turning out five thousand doses of blood at any time with our equipment, facilities and personnel, both active and on call. Our Board of Trustees has recently authorized the extension of our central bank in Honolulu by about one-third, and we are now in the process of rebuilding our present quarters for this enlargement.

F. J. PINKERTON, M.D.,
Director,
Blood Bank of Hawaii.

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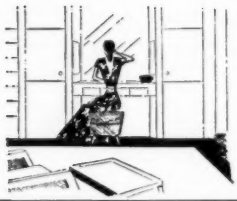

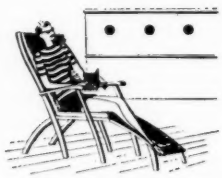

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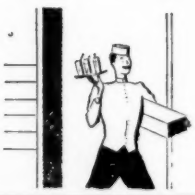

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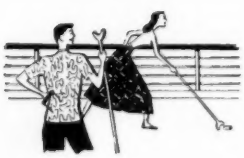

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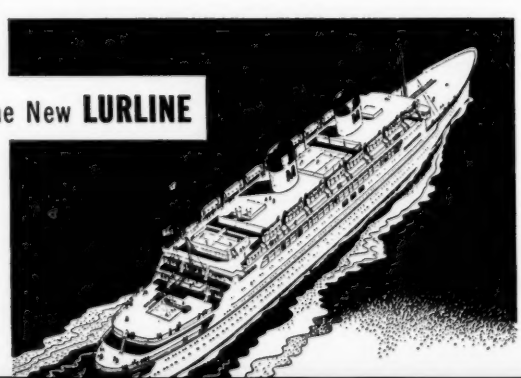

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INTER-ISLAND NURSES' BULLETIN

Official Publication of the Nurses' Association, Territory of Hawaii

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HOME NURSING PROGRAM of the HAWAII CANCER SOCIETY

ESTHER M. STUBBLEFIELD, P.H.N.*

The Home Nursing Education and Welfare Service was begun on Oahu by the Hawaii Cancer Society February 1, 1949. The program, patterned after similar programs on the mainland, aims at teaching a relative or friend how to care for the cancer patient and to keep him comfortable. Procedures taught have included bed making, with emphasis on protection of the mattress and comfort of the patient; bed bath; care of the patient's skin for prevention of bed sores; and other care as indicated. Care of colostomy cases has been undertaken with special attention to teaching the patient to care for himself. The private physician is kept informed as to the patient's condition.

The most satisfactory service has been given in situations where the nurse has been able to contact the patient in the hospital prior to his discharge. The nurse works closely with the physician in learning what information he has given the patient concerning his diagnosis and general condition. This includes the emotional as well as the physical aspects of cancer.

In the colostomy cases, most of the patients are enjoying good health, relatively free of any pain or discomfort and have made remarkable adjustments to "living with" their colostomy.

Besides the actual nursing techniques taught, the patients express a great need to talk to someone outside the family circle about their cancer, the emotional factors involved and their general physical limitations and abilities. The numerous questions asked range from "what my friend said" to "why did the doctor do that?" Patients often have many questions they would like to talk over with some professional person, but hesitate to take their physician's time.

Plans have been made for the establishment of a loan closet, to be expanded as the need arises. At present the rental service of Queen's Hospital is utilized for use of equipment required in the home care of cancer patients. The Hawaii Cancer Society will also be able, through the use of volunteer help, to provide dressings for those patients unable to provide them for themselves.

A number of the community's health organizations, including the Occupational Therapy Association, Queen's Community Health Service, St. Francis' Out-Patient Department, the Practical Nurse School, Child and Family Service, Department of Public Welfare and others, have indicated a willingness to cooperate either in a direct service program or in a consultative capacity to the personnel of the Hawaii Cancer Society in further developing this program.

Plans for developing volunteer services have been discussed with representatives of the Junior League and various racial groups in the community and individuals interested in participating in such a program. Volunteer services might include providing transportation to and from clinics or doctors' offices, making dressings, visiting patients who are bedfast, and possibly shopping for those who find it difficult to get their personal needs attended to.

The Hawaii Cancer Society's Home Nursing Education and Welfare Service has, on the whole, developed slowly but with a very definite promise for the future. The first few months of the program's existence have shown the case-load carried by the nurse in charge grow from zero to a number substantial enough to keep the staff constantly occupied in striving to translate all of the patients' needs and desires into reality.

The number of patients enrolled in the program varies from week to week and sometimes from day to day; but the increasing recognition and acceptance of the service by the physicians of Oahu, as it proves itself of definite value, augurs well for its future expansion.

Extent of the program is theoretically limited only by the number of cancer patients. The only available estimate now at hand—and that a very loose one—indicates there are probably in the neighborhood of 600 cancer patients now on Oahu. A recent study made by the Cancer Control Section of the Department of Health

* Director, Home Nursing Education and Welfare Service, Hawaii Cancer Society.

showed that only 70 per cent of the cancer patients on the island terminated in a hospital. In other words, 30 per cent of the cancer patients terminated at home and undoubtedly a much larger percentage went to a hospital only during the final week or two before termination.

With these figures—even though the primary estimate is very largely open to question—the need for the Home Nursing Education and Welfare Service is satisfactorily demonstrated. When an additional factor is taken into consideration, that the incidence of cancer is increasing, year after year, as our population ages, the need for such service to be established now, in a sufficiently flexible form so that it can expand to keep pace with a steadily increasing case-load as it develops, is readily apparent.

INSTITUTE FOR NURSES

Sponsored by the Board of Licensing for Nurses, Territory of Hawaii, Miss Mary J. Dunn, Senior Nurse Officer, United States Public Health Service, conducted an institute at the Mabel Smyth Building, February 21 to 25, 1949. A second week was devoted to follow-up of the work in training schools and nursing service agencies.

The institute, attended by 74 nurse supervisors, teachers and administrators, considered comprehensive nursing and its implications. Social and economic changes have affected our concepts of nursing and this must be taken into account in planning future nursing education. Emphasis must be placed on human behavior rather than subject matter with a positive approach to health through a good student health program; preparation for citizenship; mental as well as physical health; and preventive as well as curative nursing.

Miss Dunn pointed out ways of enriching nursing service and nursing education. Included among these were suggestions that:

1. All instructors have a 3 to 5 day observation period with the Health Department.
2. Health Department facilities be more thoroughly utilized.
3. The public health nursing curriculum guide be used more extensively in planning the curriculum for schools of nursing.
4. An in-service program to integrate social and health aspects of nursing be set up for staff nurses.
5. The public health aspects of each course be set up and worked out with a consultant nurse in planning the curriculum.
6. The services of a public health nurse coordinator be utilized.
7. More extensive home visiting by students (public health nursing affiliation) be considered.
8. A complete survey of all possible community facilities available be carried out to determine how they can be used in nursing.
9. A referral system be used whereby there will be more interchange among public health departments, schools of nursing and hospitals.
10. There be an exchange system of faculty members among various institutions in the community.
11. Better use of day care centers, nursery schools, social and health agencies be made, with a means of approach and evaluation of them.
12. Pediatric nursing in schools of nursing be enriched through affiliations.
13. Obstetric nursing in schools of nursing be enriched through clinic management, materials on child health conferences and aids from children's bureaus.
14. There be better use of outpatient departments for clinical material.
15. A new approach to nursing case studies be used with more emphasis on the background of the patient, and post-hospitalization plans.
16. There be maximum utilization of every opportunity to consider the patient as a person.
17. A curriculum be worked toward which is a completely integrated four year program under a college or university to have education as the major objective rather than needed nursing service for the hospital.

ANNE M. FISHER, *President*
Hawaii League of Nursing Education

BETWEEN THE LINES OF THE BROWN REPORT

MARY J. DUNN*

A word of commendation is due you on what you have done to date through your League of Nursing Education in studying the Brown Report. In reviewing the reports of the various groups, one finds some very pertinent and thought provoking questions raised. Am I correct in assuming that you will not rest comfortably until each of these questions is answered to your satisfaction?

In considering certain aspects or implications of the Brown Report we should keep before us continuously: Who instigated it and why it was instigated. It was instigated *by* the National Nursing Council—the coordinating agency for the fourteen national organizations concerned with nursing. It was instigated *because* the Council was convinced that inadequacies in both the quantity and quality of nursing service stemmed primarily from an outmoded system of nursing education which was no longer capable of attracting the number of students needed, or of giving the varied preparation requisite for nursing today.

The kind of nursing we are expected to render today has begun to swing further in the direction of health, with emphasis upon the so-called "normal" person, and sickness as a deviation from normal. There is implied increased understanding of the emotional factors which are a component—if not the cause—of disease. Thus, the public is coming to expect and demand that we of the health professions be able to aid presons and

* Senior Nurse Officer, United States Public Health Service

families to maintain positive health. This responsibility which we are being given is the challenge and the new source of motivation for the years ahead.

Thus, these ever increasing demands and expectations of the public—the constituents of nursing—make it impossible for us to consider curative nursing as an entity; or the patient as an entity; or of hospitalization as an entity in the life experience of any patient.

Those of us who participated in the Institute during the past week are in agreement, I am confident, that the statement just made is merely a reiteration of the central theme of our Institute: "What Are the Implications of Comprehensive Nursing?" or "Why Should We and How May We Implement the Social and Health Concepts in the Basic Nursing Curriculum?"

The development of a new pattern of nursing service and of nursing education implies the necessity of our attaining and maintaining full professional status. You will recall that the Brown Report enumerates certain criteria formulated a generation ago by Dr. Abraham Flexner for judging whether or not an occupation has attained professional status. According to his interpretation of the professions

1. They involve essentially intellectual operations accompanied by large individual responsibility;
2. They are learned in nature and their members are constantly resorting to the laboratory and seminar for a fresh supply of facts;
3. They are not merely academic and theoretical, however, but are definitely practical in their aims;
4. They possess a technique capable of communication through a highly specialized educational discipline;
5. They are self-organized with activities, duties and responsibilities which completely engage their participants and develop group consciousness;
6. They are more likely to be responsive to public interest than are unorganized and isolated individuals, and they tend to become increasingly concerned with the achievement of social ends.

Nursing has moved forward in the direction of meeting these ends, so that we may be considered an evolving profession. However, only a very small fraction of the some 1250 state accredited schools of nursing and their graduates have as yet met the tests of professionalism, all of which has greatly lowered the prestige of nursing. Furthermore, the public is provided with no greater assurance of competence than the often all too meager qualifications required by boards of nurse examiners.

It has been pointed out that "a profession is as good or as bad as the educational base on which it rests." In order to make a real profession of nursing the apprenticeship system must give way. It is the hope when it does, that the hospitals will continue to recognize their responsibility toward the education of the student nurse by making their wards available for clinical instruction. At the beginning of 1948, just under 10,000 students were enrolled in collegiate schools out of a total of 92,000 in all schools of nursing. However, almost half of the students in the collegiate schools were pursuing the regular 3 year nursing program, leading to a diploma only, since 29 of the 77 schools were offering both programs and 8 offered a diploma program only.

Are we ready or how must we "get in readiness" to take aggressive action? And here, perhaps, is where we really need to "read between the lines" of the Brown Report. I am going to share with you some of our assets and weaknesses of the professional sector of nursing, as viewed by Dr. Brown, which she pointed out to a group of nurses at a conference in Boston a few months ago.

Assets: Good social motivation; flexibility; intellectual humility; realism in planning—education programs and service programs; development in interpersonal relationships.

Weaknesses: Self-evasiveness; lack of knowledge of what the social sciences can contribute to the understanding of the patient, family and community; personality growth and development; lack of knowledge of how scientific methods may be utilized in analyzing facts; failure to use social science in understanding attitudes; lack of assurance and inability to interpret nursing to the community.

If these do represent some of our characteristic strengths and weaknesses, it would seem well for us to capitalize upon them in charting our future course. Our weaknesses usually result from too little aggression in relation to our strong points.

What is being done at national level to implement the Brown Report? Some time ago a committee was appointed to effect the major recommendations. This was an important step toward aggressive action if we are to achieve our purposes. The chairman is Mary Connor and the full-time secretary, Helen Goodale. Among other activities this committee is preparing study guides to be distributed widely over the country as an aid in studying the Brown Report. The first of the series is now in circulation. These guides will follow a definite pattern. Each will include three parts:

1. Steps in acquainting the profession with Nursing for the Future.
2. Steps in acquainting the public with Nursing for the Future.
3. Progressive reports of committees on implementing the Brown Report.

Another service of this committee is that of consultation service on request, assistance with institutes, etc. A substantial budget has been prepared which, if granted, will provide for the carrying out of very extensive plans for this committee. Still another activity of this committee is the work of a "subcommittee on School Data Analysis" with Miss Louise Knapp, chairman. The subcommittee is now distributing to all state accredited schools of nursing a survey form with the hope that these completed data will accomplish the following:

1. Facilitate planning of nursing education on a regional and national basis.
2. Furnish information to community and state planning programs.
3. Indicate present needs in nursing education.
4. Identify basic degree and diploma programs from which lists of schools with certain characteristics could be prepared.
5. Assist in recruitment.
6. Demostrate what additional funds are necessary for nursing education.
7. Give an analysis of the nation's nursing education facilities upon which to build nursing for the future.

These few evidences of actions should serve to assure us that at the national level we are not remaining still but that we are moving forward quite rapidly in nursing developments.

And now for a very important consideration. What is being done? What should be done at the local level and more specifically, here in the Territory of Hawaii?

1. Continue to study, discuss and interpret the various chapters of the Brown Report and with the realization that we must move on to an affirmative plateau and remain there.
2. Share the report with and assist in its interpretation in relation to all appropriate individuals and groups. Specifically, hospital administrators, medical profession; citizens of the community—the constituents of nursing; the legislative groups—as consumers and as those to interest in appropriating funds.
3. Keep informed of the work of the Committee on Information; and of such other committees as the one for Unification of Nursing Accreditation.

Finally, let us be reminded continuously as to why our concerted effort: To change and improve the out-moded patterns of nursing service and of nursing education so that as quickly as possible we shall have prepared the members of the health team discussed in the Brown Report, namely, the professional nurse, the bedside graduate nurse and the practical nurse.

As far as your responsibility here in the Territory of Hawaii—as I see it—goes, it calls for

1. Expansion of opportunities of preparing adequately the practical nurse (of whom we should ultimately have 1 to 1 or 2 to 1 in relation to the professional nurse).
2. It calls for improving in every way possible the two accredited schools of nursing here. Such improvement must be in terms of what is best for the student, and not in terms of needed service to the hospital.
3. It calls for the directing of every effort toward the establishment of a University School of Nursing (a basic collegiate program). Such a school of nursing should be an autonomous unit of the University with its own Dean, nurse faculty and a substantial operating budget. It should provide under its control a well integrated curriculum (preferably 4 years in length) that should prepare the professional nurse who, at the completion of her program, will have merited a baccalaureate degree with a major in nursing, and will be qualified to function as a professional nurse in the community in all so-called first level nursing positions including: general duty or assistant head nursing in the hospital; private practice—hospital and home; and staff nursing in public health under PHN supervision.

May I urge you to be satisfied with no plan less good! You are blessed with rich potentialities and facilities which, in turn, increase your responsibility to move forward, and to move forward quickly. I am confident that you can develop here programs that will be unexcelled. So with an affirmative attitude, a willingness to try new ways and a determination that it can be done the Territory of Hawaii can and should make a unique contribution to the new nursing of tomorrow. Or in the words of Whitehead—ours is "to maintain stability but never to lose the spark of change."

LEAGUE OF NURSING EDUCATION MEMBERSHIP ANALYZED

To All Co-workers:

The question is asked, "What benefit would I gain from joining the League of Nursing Education?" The aims of this organization are:

1. To consider all questions relating to nursing education, both under-graduate and post-graduate.
2. To assist in bringing about better standards of nursing service in hospitals.
3. To bring about a greater interest in matters pertaining to public health and welfare and to assist in furthering these functions by cooperating with educational, philanthropic and social groups.
4. To cooperate closely with the National League of Nursing Education in the development and maintenance of the highest ideals in nursing service and nursing education.
5. To develop a sense of responsibility and interest regarding nursing matters among graduate professional nurses who are doing any form of educational work.

In considering the objectives emphasized by Miss Dunn as the goal to be worked toward to improve nursing service and nursing education, we are well aware of our responsibilities and the unlimited opportunity to work together as an educational group for the benefit of our community.

Won't you join us?

ANNE M. FISHER, *President*
Hawaii League of Nursing Education

ANNUAL CONVENTION DATES SET

Program Chairman Alison McBride has announced September 13-14-15 as the dates for the 18th Annual Convention of the Territorial Nurses' Association which will be held in the Mabel Smyth Building.

A discussion of the nursing needs of the Territory may be the program for an evening meeting September 13, to which the public will be invited.

Miss Pearl Shalit, Nurse Consultant, United States Public Health Service Division of Mental Hygiene, will keynote the convention theme, *A new Perspective for Nursing*. Three discussion groups led by experts in the mental hygiene field will consider the understanding of the sick patient, the employed worker and the school child.

"Proposed Federal Health and Education Legislation"; a League program and a progress report from the Committee to Implement the Brown Report; field trips to Territorial institutions; and luncheon program meetings September 14 and 15 are the substance of the Program Committee's plans so far.

Nurses are urged to familiarize themselves with "Nursing for the Future" by Dr. Lucille Brown, (Russel Sage Foundation, N.Y.C., price $2) as background for the convention.

NURSES' SECTION OF THE HONOLULU MEDICAL LIBRARY

For the benefit of nurses who do not realize they are co-owners of a good reference library associated with the Medical Library in Mabel Smyth Building, it is suggested that a visit to the Library would be well worthwhile. Mrs. Hill, Librarian, and her assistant Miss Newhall, will be pleased to show you around, answer your questions, and assist in finding the books you want.

Because of the classification system used, it is not possible to have all the books belonging to the Nurses Association together in just one place, but they are all readily accessible. In addition, all other material in the library is available to nurses for reference. Plan to visit the Library on your next trip to Mabel Smyth Building.

Announcements of new nurses' books received in the Library and book reviews are to be found in a special section of the HAWAII MEDICAL JOURNAL. Just consult the index.

NURSES ASKED TO STUDY NEW STRUCTURE PLANS

From the Committee on the Structure of National Nursing Organizations comes the request that nurses consider and decide between (1) a two-organization plan and (2) a revised one-organization plan for the structure of organized nursing just as soon as a study handbook can be made available.

The two-organization plan was recommended by the Boards of Directors of the National League of Nursing Education, the National Organization for Public Health Nursing, the National Association of Colored Graduate Nurses, the American Association of Industrial Nurses and the Association of Collegiate Schools of Nursing. The Board of Directors of the American Nurses Association favored the one-organization plan because ANA members have, at two House of Delegates meetings, indicated their interest in one organization. Both of the new plans are variations of the "Tentative Plan" published in the May, 1948 *American Journal of Nursing* and elsewhere.

The two-organization plan differs from last spring's "Tentative Plan" chiefly in that there would be two separate corporations:

1. An organization to which only nurses would belong would be incorporated as the American Nurses' Association, to:
   a. Include occupational sections, which would among other things serve as bases for proportional representation of different nurse groups in the governing bodies, and councils made up of clinical specialists. The 1948 Plan suggested that occupational and clinical specialty groupings of nurses all be called sections.
   b. Offer an Assembly to afford direct voice at biennial conventions to any member wishing to express an opinion.
2. The divisions proposed in the "Tentative Plan" would become a separate corporation, the Nursing League of America, with nurse, non-nurse, agency, and school membership.
3. To coordinate activities of mutual concern to the new ANA and the new League, a joint board is proposed, made up of representatives from the boards of the two organizations.
4. Part of the headquarters services would be under supervision of the professional organization; part under the joint board; part under the education and service organization.

The new one-organization plan would use the name American Nursing Association as did last spring's "Tentative Plan," but it would differ from it in that:

1. Membership in forums, which would be discussion bodies with only advisory powers in relation to the American Nursing Association, is offered to non-nurses and agencies instead of membership in the over-all association, as proposed in the 1948 plan.
2. The 1949 one-organization plan would give voting membership in the American Nursing Association only to nurses.
3. The same provisions for Assembly, sections, and councils as indicated for the American Nurses' Association in the two-organization plan would be made for the American Nursing Association in the one-organization plan.

Details of both plans will be presented in the handbook. For further information phone or write the Nurses' Association, Mabel Smyth Building, Honolulu.

NEWS NOTES

Honolulu

MISS HAZEL A. CHESBRO and MISS ELIZABETH ST. J. PATTERSON, both graduates from the Highland School of Nursing, New York, are presently enrolled in the two-month course in tuberculosis nursing at Leahi Hospital. This course of instruction has been approved by the Board for Licensing of Nurses, Territory of Hawaii and by the Veterans Administration for the training of veterans. It covers medical, surgical and nursing classes and numerous clinical observations and participation in related programs (case-finding; patient education; rehabilitation; diversional therapy; pathological laboratory; operating room; outpatient and social service). Field trips are also made to community agencies assisting with the total care of tuberculosis patients, their families and other contacts.

Plans have been completed for the monthly staff education program which began in March. In addition, Leahi still offers an extensive in-service staff education program for the orientation of every new staff member. Classes and demonstrations designed to provide basic

instruction in tuberculosis and on protective measures are held beginning from the first day of employment.

Nurses who have recently joined Leahi Hospital Staff include:

LAVERN CARMICHAEL, Mississippi Baptist Hospital, Mississippi.

HELEN EISSNER, Bellevue Hospital, New York.

MADELINE FERNANDEZ, Queen's Hospital, Honolulu.

MILDRED KINGERY, Los Angeles County General Hospital, California.

ROSA LOUBNON, St. Francis Training School, Kansas.

SHIRLEY MCCORMICK, State University of Iowa, Iowa.

MARILYN RITCHISON, State University of Iowa, Iowa.

LESLIE ZANE, St. Francis Hospital, Honolulu.

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Kauai

MISS THELMA HENSLEY, Superintendent of Nurses, Mahelona Hospital, will be on the mainland for three months beginning with April. She plans to study as well as travel.

MISS JANICE JITSUKO ARASHIRO and MISS PAULA NAKAMURA, both graduates of St. Francis Hospital School of Nursing, Honolulu, joined the nursing staff of Mahelona Hospital in February.

MARY J. THOMAS of Wilcox Memorial Hospital has been appointed chairman of the Kauai Nurses' Association Bulletin Committee. HELEN GAGE and KIMIE TAMASHIRO will also serve on the committee.

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Maui

TOSHIE HAMASHIGE, Queen's Hospital graduate, and RUTH NAKASONE, St. Luke's Hospital graduate, recently joined the staff of Pioneer Hospital, Lahaina.

MRS. AGNES GAY, Pioneer Hospital staff, became the mother of a baby girl born March 6, 1949.

MISS MARJORIE FUJIMOTO of Paia Hospital was recently married to Mr. Yasuyo Okinaka.

MISS PATRICIA KELLAS, a graduate of Providence Hospital in Oakland, California, is now a member of the Paia Hospital staff.

MRS. M. C. SCHMIDLING, who has been attending school in Peoria, Illinois, has returned to the staff of Malulani Hospital.

MRS. TRINADAD BALDAG is on sick leave and has been in Malulani Hospital for major surgery.

MISS MICHIE KOMO, a member of the Board of Health staff, is now Mrs. Kamitaki.